

# **Progressive Relationship Development in Supply Chain Alliances**

## **An Empirical Study**

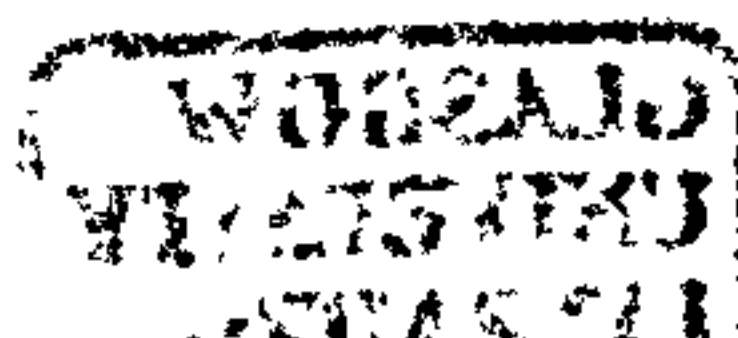
**By**

**Beverly Anne Wagner**

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**Chapter Six**  
**Findings - Part III**



## 6.0 FINDINGS – PART III

### 6.0.1 INTRODUCTION

To remind the reader, the purpose of this study was to investigate the concept of phased development in alliances and the research questions being investigated are:-

1. How do alliances evolve over time?
2. Are progressive stages evident as the alliance matures and in what way does one stage differentiate itself from another?
3. Given that the degree of interaction, learning and innovation may alter as the alliance relationship develops, what characteristics are evident within each of the stages ?
4. Are certain characteristic more important in one phase of the evolution than in another
5. What factors identify the transition from one stage to another?
6. What factors trigger stability and instability in alliances and what happens when the alliance ends?

The author's involvement with the participant companies was limited to attendance at project related video conferences, project reviews and research team discussions (refer to chapter 3.14, page 108). In the first instance, using secondary data, it was intended to find out *how the alliance had developed; if progressive stages could be identified; what characteristics differentiated one stage from another and if it was possible to identify particular events that signalled the relationship had moved into another stage.*

The benefit of using secondary data was that it enabled the researcher to test the findings from the previous two cases. Implicit in the developing framework was the idea that movement could be forward, backward and indeed iterative.

Information for the current analysis has been drawn from interviews, minutes, researchers' notes and case study compiled at the time of the project. Subsequent personal interviews were conducted by the author during 1998 and 1999, with senior managers who took part in the Sun Microsystems and Birkbys alliance. (see appendix VIII for organisational background).



Information drawn from this study reinforces the *Stage 0* identified in the SCA (refer to chapter 5.0.1, page 172) and the following describes the activities undertaken by Sun Microelectronics and Birkbys Plastics prior to the start of the alliance in 1991. Table 6.1 shows the characteristics drawn from the secondary data in the first stage of the Sun Microsystems and Birkbys alliance.

STAGE 0	
Characteristics from Sun/ Birkbys data	Dominant characteristics
<ul style="list-style-type: none"><li>• Informal agreement</li></ul>	<ul style="list-style-type: none"><li>• Alliance agreement</li></ul>
<ul style="list-style-type: none"><li>• Competitor analysis</li></ul>	<ul style="list-style-type: none"><li>• Environmental analysis</li></ul>
<ul style="list-style-type: none"><li>• None</li></ul>	<ul style="list-style-type: none"><li>• History of working together</li></ul>
<ul style="list-style-type: none"><li>• Formal process of selection</li><li>• Strategic decision by customer</li></ul>	<ul style="list-style-type: none"><li>• Partner selection</li></ul>
<ul style="list-style-type: none"><li>• None</li></ul>	<ul style="list-style-type: none"><li>• Previous alliance experience</li></ul>
<ul style="list-style-type: none"><li>• Strategic outsourcing</li><li>• Widen customer base</li><li>• Opportunity to move into new markets</li></ul>	<ul style="list-style-type: none"><li>• Strategic intent</li></ul>

Table 6.1 Sun Microsystems / Birkbys, Characteristics in Stage 0

**STAGE 0**

**6.1.1 Alliance Agreement**

At the outset of this alliance one of the basic problems was that there was no attempt to identify a vision or strategy expectations from each partner.

*“There was certainly no grand plan or strategy written down, saying this is where we both want to go and making sure the two directions were complementary. I think the alliance was well-intentioned, but not at all planned, until about two years ago (1993), when we sat*



*down and began to look at the relationship; where are we, and where do we need to be, and how are we going to get there?” (CM,SM,96,14:3)*

### **6.1.2 Environmental Analysis**

*“In 1989 Linlithgow was the first off-site venture. At the time we were quite a young organisation, very US oriented and comfortable with our suppliers in the States. As we were within the EC, the idea was to source components in Europe not only for this site but also for the US. So we set out on a very comprehensive survey of all European suppliers.” (DTPM,SM,96,4:4)*

Environmental analysis of Sun’s market was not only essential but it had to be continuous. Product development was rapid and customers highly knowledgeable in terms of their needs and other sources. On average the life cycle of a workstation design was less than one year, and the rate of new product innovation was increasing. Sun had several competitors and if the company failed to meet customer needs they quickly went elsewhere.

Sun was increasingly reluctant to expand its manufacturing base and the preferred solution was to concentrate on product development and to outsource as much of the lower value manufacturing as possible.

### **6.1.3 History of Organisations Working Together**

The two companies had been collaborating since 1991, although Sun first showed interest in Birkbys as early as 1989. In 1993, Birkbys created a dedicated cell of sixteen staff assembling only Sun products, for the Linlithgow plant. Until 1995, the work Birkbys did for Sun was entirely for Linlithgow, but a significant amount now went to Sun in the US and by 1996, it had become one of Sun’s primary suppliers of enclosures. In 1996, Birkbys opened a new facility in Glenrothes, Fife which manufactured not only for Sun, Linlithgow, but had also taken over most of the work previously done for Sun at the Birkbys plant in Liversedge.

*“The link with Birkbys has really been forged over the eight years that I’ve personally been working with them - and that kind of investment doesn’t happen overnight. If we bring anybody else on board, it would be our intention to build something like that.”*  
(CM,SM,96,14:2)

#### **6.1.4 Partner Selection**

Production at the Linlithgow plant began in 1989 using enclosures supplied from the US. As production increased, management wanted to shorten its supply lines for these bulky items by sourcing materials in the UK.

Sun was looking for a quality, comparable to what it was getting from three US suppliers. Material also had to be equivalent in terms of price and the source was important to reduce transportation costs. The Sun supply team surveyed suppliers in continental Europe, UK and Ireland and this included known as well as new suppliers.

Sun was looking for enclosures and Birkbys had the technical expertise required by Sun at the time. Birkbys’ infrastructure included R&D, laboratories, chemical analysis, coordinate measurement machinery and presses. It was also experimenting with Bakelite and other plastics. These factors, as well as very experienced staff, contributed to the ultimate selection of Birkbys.

*“What we’re going to do is select a supplier who we believe has got the correct technical and commercial skills and we’ll sit down and develop a price as we go. Even when you try the competitor bidding route the design you’ve got at the start is usually as different as night and day from the eventual design anyhow, so it defeats the purpose as the price has been negotiated anyway.”* (CM,SM,95,2:2)

Sun’s selection of the alliance partner was logical and systematic. It was based on the contenders technical and commercial ability to carry out the project and continuity had to be conditional on open book accounting to control costs.



### **6.1.5 Previous Alliance Experience**

#### **Sun Microsystems**

From the beginning, the company had deliberately limited its involvement in manufacturing. The two manufacturing sites, at Milpitas, California and Linlithgow, Scotland, concentrated on assembly and test operations, and acquired from suppliers disc drives, memory, keyboards, printed circuit boards, enclosures and monitors. Less than 30% by value of materials used in Sun's production touched its factories. This outsourcing strategy allowed management to better utilise engineering expertise and capital resources, which could focus on design and development of Sun's high value products.

The company's heavy investment in SPARC chip design, UNIX operating systems and graphical interface technology gave its products their unique features, and it felt that these elements should not be outsourced. However, major players in the industry including Sony, Texas instruments, Toshiba and ICL offered electronic manufacturing contract services and many of the components Sun required could be bought from these and other suppliers. In September 1996, Sun decided that it would outsource the complete manufacture of two products at the lower end of its price range.

Outsourcing policies were also applied to logistics. In 1993 Sun had reached an agreement with three competing freight groups to jointly manage its global distribution network. The company had already decided to outsource its distribution department and had concluded that no single company would be able to handle all the work. It selected Nippon Express USA for distribution throughout Asia, Roadway Logistics for the US and Frans Maas for Europe and the three companies were to handle all of Sun's material shipments. In addition to handling materials into and out of their areas, the haulage companies dealt directly with suppliers, vendors and the manufacturing sites. In practice, other freight companies would carry some materials for Sun, but on the other hand Frans Maas had taken on greater responsibility for managing the flow of supplies to the Sun assembly lines. In fact Frans Maas staff actually had their own working areas within Sun facilities.



## **Birkbys**

The company had good long-term relations with customers especially in the motor industry. These however did not involve the close alliance-type of arrangements that Sun had envisaged.

### **6.1.6 Strategic Intent**

Sun Microelectronics was mainly a design and marketing company and the partnering link with a supplier of enclosures was in line with the corporation's wider sourcing strategy.

For Birkbys, the attraction of the alliance was the opportunity to widen its customer base. Working with a prestigious customer like Sun was very attractive, as up to that time Birkbys had depended on selling exclusively to the automotive industry.

The competitive power of the market underpinned the move to partnering in both companies. Consumers were changing and in the past a long lead-time was not important since customers had been more willing to wait for new features and technical innovations. As commercial pressures built up, customers expect shorter, predictable lead times and were more willing to go to competitors if these needs were not met. As a way of meeting lead times and by focusing on resources, the alliance between Sun and Birkbys had an obvious attraction for both participants.

### **6.1.7 Summary**

Sun management believed that a constant flow of new products was essential for the continued growth of the company. Offering products with better performance helped to maintain interest and keep ahead of competitors. New models usually brought higher margins than those they replaced. This was especially so when the company adapted them to the customer specific requirements, by adding optional extras such as graphical interfaces, or more memory.

Sun products were increasingly aimed at the higher end of the market, involving lower volumes and higher margins. To reduce costs at the other end of the scale, that is in the high volume-low cost market; the strategy chosen has been that of outsourcing.

*“Our value add has increasingly become testing systems integration and preparation for customers. We call this pre-staging. For example, a customer might place an order for several million dollars not only for the products themselves but also for a complete system to run his business. We are finding we have to do more and more pre-stage, as we provide more and more customised solutions.”* (ESCM,SM,99,11:4)

About 1990, the priority for Sun to establish a local enclosure supplier overruled all other factors. At no stage did the companies jointly evaluate external trends and there were few, if any, discussions regarding a shared vision. Neither did Sun anticipate the challenges of working with a new supplier, whose expertise was in an entirely different industry. Sun personnel were used to rapid product life cycles and this created a dynamic and flexible culture. As might be expected in a more stable industry where product change was slower, this influenced Birkbys predisposition to change.

Sun's corporate commitment to partnering was later to be further supported by a process-re-engineering programme that closely involved Birkbys.

In contrast to other customer organisations, Sun had an unusual perspective regarding suppliers who were perceived as being at risk of putting all their eggs in one basket.

*“I think it's equally important that we protect some of our suppliers from Sun. I mean there are some companies who are quite happy to get almost all of their work from a single source. This is great as long as the work keeps coming, but, all it takes is somebody to build a better mousetrap and then everybody goes down together.”* (CM,SM,96,10:7).



6.2 STAGE I : Duration 1991-1993

Table 6.2 below, shows characteristics drawn from secondary data sources. The dominant characteristics provided the structure to describe in detail how the Sun/Birkbys relationship developed in its early stage.

STAGE I	
Characteristics drawn from Sun/Birkbys data	Dominant characteristic
<ul style="list-style-type: none"><li>• Committing resources</li><li>• Closer working relations</li><li>• Growing confidence in partner's abilities</li></ul>	<ul style="list-style-type: none"><li>• Building Trust</li></ul>
<ul style="list-style-type: none"><li>• Ready allocation of time and resources</li><li>• Investment in relationship – time and resources</li></ul>	<ul style="list-style-type: none"><li>• Commitment and Leadership</li></ul>
<ul style="list-style-type: none"><li>• Regular information sharing</li><li>• Understand partner processes</li></ul>	<ul style="list-style-type: none"><li>• Communication</li></ul>
<ul style="list-style-type: none"><li>• Sun score card</li></ul>	<ul style="list-style-type: none"><li>• Coordination and Control Mechanisms</li></ul>
<ul style="list-style-type: none"><li>• Problem definition</li><li>• Transfer of ideas</li><li>• Supplier development</li><li>• Learning new adding value processes</li></ul>	<ul style="list-style-type: none"><li>• Learning</li></ul>
<ul style="list-style-type: none"><li>• Sun Score Card</li></ul>	<ul style="list-style-type: none"><li>• Performance Metrics</li></ul>
<ul style="list-style-type: none"><li>• Joint scheduling</li></ul>	<ul style="list-style-type: none"><li>• Resource planning</li></ul>
<ul style="list-style-type: none"><li>• New product introduction</li><li>• Supplier development</li></ul>	<ul style="list-style-type: none"><li>• Setting objectives</li></ul>

Table 6.2: Dominant Characteristic in Stage I

Stage I of the Sun and Birkbys alliance, which lasted for about two years, was a period of intense supplier development, led by Sun. The following section describes how the companies changed during this time.



### 6.2.1 Building Trust

Trust was erratic but, as more difficulties were overcome, Sun's confidence in Birkbys grew. It was a two way process and Birkbys now better understood the demands of customers like Sun.

Birkbys was a traditional engineering company, used to working in a stable and mature sector and it took some time for the management to realise that it would need to respond very quickly to Sun's demands. The old way of revising and refining was no longer appropriate, as it signalled apparent inertia on the part of Birkbys, which was unhelpful in building confidence during this early stage of the alliance.

*"The attitude was, shall we say, old fashioned and there was a sense of cultural inertia about the place. Our products change in eighteen month cycles and we don't have time to wait for the next revision, things have to be done right now."* (DTPM,SM,96,5:2)

### 6.2.2 Commitment and Leadership

It was explicitly recognised by Sun that considerable time and effort would have to be devoted to developing Birkbys capacity. It therefore became Sun's aim to transform Birkbys into a global company.

### 6.2.3 Communication

Communication between the two organisations was intense. Sun personnel were spending a lot of time educating Birkbys and promoting the idea of higher standards. Birkbys began to change, responding faster and with a greater flexibility.

*"I think the more they understand the planning issues, the volatility of demand and supply, the more it affects their flexibility. " Do I need extra capacity, more trucks.. . ?" Even the very fact of passing information regularly about changes in volumes and having these*

*conversations, is a sea change in itself. It gets everyone into the way of adapting, by learning to cope with the lows and the highs.” (BP,SM,96,4:4)*

Personal networks built up which enabled people to talk directly to the appropriate person in Sun. This was a major breakthrough, given that it was often very difficult to speak to people in the Sun organisation because of their dependence on voice mail and e-mail.

*“Schedule changes happen every day, and we have to react to them quickly. Personal communication is the main thing - in my view, E-mail and Fax are all very well, but unless you talk to a customer, you’ve lost. You’ve got to talk to them directly. The bane of my life is the answering machine - because you lose that personal touch which is so important.”*  
( SC,BP,96,3:2)

*“People are becoming more open with each other. If you don’t know who’s picking up the phone on behalf of Sun Microsystems, it becomes very clinical and I encourage people to share news, particularly bad news, with each other. If our forecast has collapsed, tell people right away, because you know its going to cause problems. Don’t hide it, and make sure they know what the issues are, and get them to think through how they can cooperate so that we manage the situation. Likewise with us, if the vendor has bad news, we want to know about it.”* (BP,SM,96,1:2)

#### **6.2.4 Coordination and Control Mechanisms**

Sun engineers who worked with the suppliers had to approve the manufacturing processes which Birkbys used on Sun work, and any changes to them. Sun tooling engineers also approved the design, the manufacture and modification of all moulding tools used. In addition, Sun took on tasks and responsibilities in areas of manufacturing that the supplier had previously undertaken.

A kitting system was introduced to help Birkbys meet Sun standards. All parts needed were assembled into bundles, with each kit containing the exact components required to assemble the product part. Staff took the kit, and assembled it in the enclosure (case). The



finished product part was then tested, wrapped and passed to the distribution area ready for dispatch by Frans Maas to the kitting area in Livingston.

Birkbys already had a shop floor system of “Quality Circles”, although it was not known to what extent it specifically addressed Sun quality issues.

Although coordination and control had to be a two way process, Sun felt that Birkbys was to blame for every problem. However, as the alliance matured, people realised this was not necessarily the case.

*“ A lot of coordination problems happen here. I think I’ve had more problems getting our people to acknowledge that, than getting the Birkbys people to realise it. I think we’re the main cause of inconsistency, but trying to prove that has been extremely difficult, especially when we’ve got very volatile manufacturing managers, who firmly believe that every problem is created by a supplier, and that Sun doesn’t cause problems! Only suppliers make problems! So we’ve had some mindset changes to go through internally and we’re still fire fighting. This attitude never goes away, there are just quiet periods. It can blow up at any time.” (CM,SM,96,12:5)*

### **6.2.5 Learning**

It soon became apparent that Birkbys was not only to supply the moulded enclosure but would also be involved in new processes for painting and plating the unit. Birkbys found this difficult as no one had anticipated that it would have to complete the job. It was news to Sun that Birkbys were unable to carry out the task properly.

In the past Sun had been quite adversarial with suppliers and would certainly have pounced on this. Because this reaction was changing, some people suggested that Sun was in a “transitional mode.”



*"I think we're probably still at a transitional stage. Maybe the men who handle commodities would be able to give you a better idea. From the outside looking in, my feeling is that we used to be almost wholly, "we'll get a better deal down the street." Whereas now, we still want to know what's happening down the street and we may take a little of it to test but not as much as we used to." (CM,SM,96,19:3)*

#### **6.2.6 Performance Metrics**

The main method of measuring supplier performance was by use of the "Sun score card", designed and administered by staff in Linlithgow.

Supplier performance was graded, as prescribed in the score card model. The model covered a comprehensive set of standards appertaining to quality, lead-time, delivery, flexibility, process technology, price, support and service. Checks were quarterly and the results were faxed to the supplier. Sun staff then met the supplier's staff to discuss and analyse the data and agree how to overcome the areas of weakness. It was imperative that Birkbys achieved a good score, which was a crucial factor to future prospects of Sun business on a global basis.

*"My role in the scorecard is to ensure that we do it on time, pull all the results together and lay them out in a format that we and the supplier can understand. I then communicate it to the supplier, take any feedback and document any corrective actions. I do a follow-up to make sure that all actions are done and try to help out if there's a problem." (CM,SM,96,10:5)*

The score card review was the trigger for joint corrective action.

*It would begin with a team going to look at problem areas. For instance, with Birkbys we've consistently had difficulties with quality, the bumps, scratches, and scrapes that are in one sense cosmetic and highly subjective. This has been an ongoing issue and in my experience, difficult to solve, because it means something different to everyone who looks at it. Unfortunately, everybody's got an opinion and the entire world is becoming an expert.*

*It's extremely difficult to correct, so one of the things we've tried to do is to have a lot more interaction, for example with the manager of Birkbys' final assembly. He's in here this morning, looking at our process along with some of our engineers. So he can say, "yes I understand that's a fault", or at least, "I thought that was acceptable and now I realise you see that as a problem". So we're actually getting them to look into it. We're not just sending back a truckload saying all this is rejected and the manager's saying, "I don't understand. What for?" (CM,SM,11:2)*

To assist Birkbys meet the score card requirements, there was a computerised "Quality Operating System" to measure performance relative to lost time, tooling faults, scrap, re-work, environmental measures etc. Statistical Process Control had been implemented on the moulding machines and an ISO quality system was in force. Sun recognised however that, in common with other organisations, there was too much red tape.

During this time, a lot of discussions and meetings took place to resolve the problems.

*"We couldn't see where all of this would lead to because, to be quite honest, in the initial two years we had with them, there was more problem solving and ironing out of issues than discussing real strategic direction. To be quite honest, they nearly fell off the ladder at one point and it was a question of, do we stick with them or do they go." (DTPM,SM,96,5:4)*

*"The quality issue was the main problem. It was our standard versus what they were used to producing. We wouldn't put up with it and it took a while to get on common ground." (DTPM,SM,96,6:2)*

From the outset, one clear operational change was that Birkbys had to work to the higher standards demanded by Sun, rather than to those which their existing customers expected. Technical help from Sun was available to achieve this quality and changes in behaviour were necessary on the part of both organisations. From the earliest days, Sun staff worked at Birkbys to help meet the standards. Supply management staff, as well as manufacturing engineers, spent a lot of time at Birkbys explaining how they wanted things done.



*“Nearly everyone in our inspection department and my two support engineers went down there. We took over for a couple of weeks until we had the process the way we wanted it. We learned a lot from what they were doing and they taught us a lot. It was a good way to harmonise expectations.” (DTPM,SM,96,6:4)*

### **6.2.7 Resource Planning**

Although difficult to achieve, volatile demand called for minimising inventory, while keeping assembly lines working. Sun’s close dependence on Birkbys shaped the systems for scheduling production and linked Birkbys output to Sun’s requirements.

The traditional way it was done was that the buyer/planner sent Birkbys’ sales coordinator Sun’s requirements for the next three months. This order could not be broken down into shorter periods, because of the volatility of demand.

Sun drew off weekly requirements against that order. The sales coordinator at Birkbys received these and entered them into the Birkbys system. All production departments could then see the schedule on their screens. Materials management reviewed the implications of incoming components and communicated these to the suppliers. This was a complex job considering the volume of added- value work now being done.

### **6.2.8 Setting Objectives**

In the early stages of this alliance, Sun gave little consideration to the overall strategic direction of its relations with Birkbys. The priority was to establish a reliable local supplier and secure Sun’s supply base by building up and developing Birkbys as a key supplier of enclosures.

*“Back in 1991 I don’t think that worldwide supply was on the agenda. We were looking local, to be dealing with somebody who was within reasonable distance.” (DTPM,SM,96,5:3)*

Birkbys too, in the first instance, was not all concerned about setting objectives, although it did have the foresight to realise that business with Sun would enable the company to diversify and grow.

*“We should be picking someone who can manage this piece of the jigsaw for us - who's got the infrastructure, and is willing to move his business in that direction. That's what we went looking for - Birkbys said that was the way it wanted to go - to grow the revenue, grow the breadth. At that time it was already a £30m moulding company, and probably wouldn't get much bigger. It had to branch out, so the timing was just right. It had to bring in new skills and re-train.”* (DTPM,SM,96,5:1)

### **6.2.9 Summary and Transition to Stage II**

Sun did not articulate its vision of the alliance to Birkbys and how Sun intended the companies to work together. Very little consideration had been given to the overall strategic direction. Birkbys had no idea of the extent that it would have to change to meet Sun's requirements. This lack of appreciation strained relations from the outset, particularly as Sun soon set about demanding changes to the supplier procedures, which was something it was used to doing.

Problems arose very quickly when Sun found quality poor, which meant large numbers of rejects. More time was being spent fire fighting, rather than discussing tactics.

Seeds of doubt were sown early on. The first crisis, which concerned quality issues and standards, culminated with the question as to whether or not to continue the alliance. Despite the fact that Birkbys was ISO 9002 registered and had achieved the Ford Q1 award, Sun demanded higher standards than any of Birkbys' other customers. It took some time for this to sink in. The crisis of confidence resulted in a discussion at the highest level in both companies regarding the future of the alliance.

Sun provided more resources to help Birkbys overcome these early difficulties. The transition to *Stage II* was characterised by Sun's growing confidence as Birkbys began to



manage the scorecard criteria with greater efficiency and improved quality. Table 6.3 summarises behaviour which signalled the transition to *Stage II*.

Stage I	Transition Stimulus	Stage II, Transition Indicators
<ul style="list-style-type: none"> <li>• Building trust</li> <li>• Commitment and leadership</li> <li>• Communication</li> <li>• Coordination and control mechanisms</li> <li>• Learning</li> <li>• Performance metrics</li> <li>• Resource planning</li> <li>• Setting objectives</li> </ul>	Crisis followed by Managerial Action	<ul style="list-style-type: none"> <li>• change of attitude</li> <li>• improved supplier performance</li> <li>• communication and open dialogue</li> <li>• friendly behaviour</li> <li>• building trust</li> <li>• Supplier given more value-added work</li> <li>• future oriented</li> </ul>

**Table 6.3: Transition from Stage I to Stage II.**

### 6.3 STAGE II: Duration 1993-1996

Birkbys was now meeting Sun standards and had created a dedicated assembly cell in the Liversedge plant. There was a greater understanding of the cost of the enclosure and more open communication between the companies, the spin off from which was growing interdependence. Inter-organisational teams had been made responsible for the *Perform-to-Pay* project (see 6.3.4,page 239) and related sub projects. By the end of 1996, Birkbys had a Sun dedicated plant in Scotland and was beginning to supply Sun in the US.

Table 6.4 below, shows, dominant characteristics drawn from secondary data used to describe the events in Stage II.



STAGE II	
Characteristics drawn from Sun/Birkbys data	Dominant characteristics
<ul style="list-style-type: none"> <li>• New product introduction</li> <li>• Early supplier involvement</li> </ul>	<ul style="list-style-type: none"> <li>• Compelling Purpose</li> </ul>
<ul style="list-style-type: none"> <li>• Dialogue to resolve issues</li> </ul>	<ul style="list-style-type: none"> <li>• Conflict Management</li> </ul>
<ul style="list-style-type: none"> <li>• Information exchange</li> <li>• Joint planning</li> <li>• Investment by supplier in new factory</li> <li>• Co-location of personnel</li> </ul>	<ul style="list-style-type: none"> <li>• Interdependence</li> </ul>
<ul style="list-style-type: none"> <li>• Understanding joint processes</li> <li>• Understanding partner business</li> </ul>	<ul style="list-style-type: none"> <li>• Learning and Alliance Skills</li> </ul>
<ul style="list-style-type: none"> <li>• Early design stage input</li> <li>• Joint team projects</li> </ul>	<ul style="list-style-type: none"> <li>• Joint decision making</li> </ul>
<ul style="list-style-type: none"> <li>• Improved communication behaviour</li> <li>• Individual's responsibility increasing</li> </ul>	<ul style="list-style-type: none"> <li>• Personal Satisfaction and Motivation</li> </ul>

Table 6.4: Dominant Characteristic in Stage II

6.3.1 Compelling Purpose

In 1993 Sun was to begin manufacturing a new product in Linlithgow, code named Aurora. The new product included sheet metal components that Sun had to first, source and second, assemble into the containment enclosures.

The commodity manager questioned this approach, citing Sun’s outsourcing and reduced manufacturing strategy. He proposed that the company should make one supplier responsible for delivering ready assembled enclosures to Linlithgow. At least one other moulding specialist was given the opportunity of the work, but declined the business.



*“As our philosophy and strategy moved forward we’re really no longer looking for a guy to make plastic or metal, we’re looking for someone to supply the whole thing. If that also meant procuring and putting in some cables, some boards and whatever on our behalf, then that’s the kind of supplier we needed to find. Well, Birkbys rose to that challenge.”*  
(CM,SM,96,2:1)

Birkbys on the other hand decided to follow Sun in its strategic direction. It means that Birkbys now added components inside the plastic enclosure, including some fabricated metal, a small computer interface and some cables.

### **6.3.2 Interdependence**

The two companies became more interdependent as Birkbys grew in strength and became accustomed to meeting Sun’s demands. Birkbys was extending its processes and providing Sun with a high quality product. This allowed Sun to optimise its own manufacturing potential, increase the volume of units and to cut the assembly line time to seven minutes per unit. Sun was able to concentrate on value adding activities such as fabricating units in unique configurations.

Interdependence increased on account of Birkbys’ decision to site a new factory at Glenrothes, a location relatively near to Sun. This significantly reduced the lead-time for delivery of enclosures and enabled quicker response.

Growing mutual reliance of Birkbys and Sun was evident from the joint resource planning and scheduling. As Birkbys value added work for Sun continued to increase and delivery times shortened, it became imperative that Sun gave Birkbys more notice of requirement changes. This meant that both parties not only had to be aware of market demand, but also conscious of the lead times of sub tier suppliers. Staff had to learn to respond rapidly to the customer. The consequence of collaboration with Sun’s resident planner was that daily and even hourly requirements were made known to Birkbys.

Sun's confidence in Birkbys' abilities grew. Assured price was a major benefit to emanate from the alliance. Sun now knew Birkbys' cost structures and profit margins and used this knowledge to pin down the cost of enclosures for the next eighteen months.

*"This way we set the level of one or two key prices at meetings. Because we've got a declaration of all the elements at the beginning we can then sit down and run through the costs either, when the product is ready to start shipping, or just before the date when we do our quarterly forecasts." (CM,SM,96,3:7)*

*My feeling has always been that "these men are only as good as we allow them to be." And if we give them poor information we're going to get a poor part. If we don't give them honest and constructive feedback it won't get better." (CM,SM,96,13:5)*

### **6.3.3 Learning and Alliance Skills**

Birkbys gained enormously from the alliance and freely acknowledged that back in 1991 it had not imagined the volume and diversity of business it would eventually undertake for Sun. No one foresaw just how much the alliance would change the Birkbys organisation and certainly dealing with the United States market was beyond its widest dreams. Practices evolved by trial and error and Birkbys transferred benefits of learning to its customers.

Plastics moulding is a mature industry with little scope for eliminating costs and Sun realised that competitive bidding for each new product was an unprofitable exercise. Trying to save money by continually seeking tenders wasted valuable time and Sun decided not to pursue that route.

As projects increased in complexity, tracking responsibility and maintaining accountability became an important issue. The allies learned that to avoid disorder it was necessary to establish explicit structures, such as a responsibility matrix. Sun wanted Birkbys to take



greater responsibility for products and suppliers and decided that the matrix should cover the following areas: -

- Supplier selection
- Part approval
- Procurement
- Assembly
- Warranties
- Failure analysis and corrective action
- Metrics

Part of the agreement was that Birkbys should own the matrix and take responsibility for using it to schedule and plan sub-tier supplier's work.

As Sun's confidence in Birkbys grew, it asked the latter to take on work with greater added value. This meant that Birkbys had to learn a new skill, that is, managing sub-tier suppliers working to Sun standards. The quality of the enclosure delivered to Sun did not just depend on the quality of Birkbys work, it also depended on miscellaneous metalwork and cables purchased from other suppliers.

In reality, this was not left entirely to Birkbys. Sun and Birkbys were working hand in hand, helping each other, by drawing on in-house Sun experts, such as cable engineers. The intention was that eventually Birkbys would develop that resource itself.

*"They have taken on a lot more value-add work and have gone through a learning curve as well."* (DTPM,SM,96,5:1)

*"Moving to Glenrothes added a lot more customer focus to Birkbys. A major advantage to us was that they were local and visited us more."* (DTPM,SM,96,8:3)

*“The staff are more likely to highlight potential faults before the customer sees them. We’ve learned that in the course of working with them and by being shown what is right and what is wrong. Attention to detail is what it is all about.” (DM,BP,96,3:4)*

Concerns were raised once again about responsibility and the ally companies had to pin down the fundamental reasons for this problem. In the past, Sun had selected sub-tier suppliers for Birkbys to work with. This meant Birkbys working with suppliers it would not necessarily have chosen although Sun expected Birkbys to accept responsibility for the supplier’s long-term performance and development. As it turned out, Birkbys inherited only one supplier whose performance contributed to quality problems.

Over the years Sun had accrued both explicit and tacit knowledge about managing suppliers that was articulated and transmitted to Birkbys.

#### **6.3.4 Joint Decision Making**

By 1996, Birkbys understood Sun’s business better than ever before. Sun proposed that both companies inventories should be reduced in a planned manner. Birkbys was directly involved with scheduling and order information coming from Sun. This was subsequently termed *demand-pull* and meant that Birkbys had to supply kits in numbers and just-in-time to match the demand in Sun. Not only were inventories reduced, but it also cut double handling and scratch damage. Responsibility for inventory management was finally passed in total over to Birkbys.

As the association matured, the work and responsibilities involved in new product development were more widely shared. By 1996 Sun staff and Birkbys moulding and tooling engineers worked together from the very earliest stage of product design. This enabled Birkbys to offer its expertise and to influence the original design formulation.

In the past, Sun would have presented a design and asked Birkbys to make the moulding tools. If tools were outsourced elsewhere, it was still necessary for Sun to tell Birkbys



when the product needed to be ready for trials. Birkbys had to forward allocate time on machines and to secure supplies of resin, which sometimes took several weeks and notify its design, materials and production staff of requirements, well in advance. Delays had severe market implications for Sun.

The introduction of a Resident Planner was a new concept to both Sun and Birkbys. This person was employed by Birkbys, but worked in Sun offices. Once again the initial stages of implementation raised difficulties in terms of role clarification and job description. Defining the boundaries of the position appeared to be a problem as the planner was seen as the contact point for all matters concerning Birkbys, although in fact the role was meant to focus on immediate materials requirements.

With the passage of time, these details were resolved and advantages of having a person based within the customer organisation became evident. Essentially these derived from having a presence on the location. When problems arose the Resident Planner took part in discussions to resolve the issues and was generally able to monitor events and assess the gravity of the delay. The resident planner therefore positively impacted on Sun's planning and scheduling.

*"I think Birkbys together with global supply planning is helping a lot. Giving the supply plan directly to Birkbys allows them to do their business as opposed to us changing the supply plan around. This has helped everyone and we are going from strength to strength."* (BPRF,SM,96,10:4)

The demand-pull arrangement was helped by the appointment of Birkbys employee as a Resident Planner within Sun.

In 1995 a major global re-engineering project in Sun, termed Perform-to-Pay (PTP) was introduced which had a significant impact on the alliance with Birkbys. Its purpose was to radically simplify business processes within the entire Sun Microelectronics supply chain

and create cost saving opportunities by reducing time, improving quality and as a consequence, realising increased customer satisfaction.

All of this was to be achieved by providing high performance support systems and by minimising duplication as a result of cross functional integration.

Projects initiated to pursue PTP were concerned with the following:-

1. Introduction of new products which included early supplier involvement.
2. Demand and planning fulfillment, aimed at getting suppliers involved in planning so as to “trigger” stock replenishment e.g. the Demand–Pull model and Electronic Commerce (EC).
3. Accounts invoicing and looking at payment in terms of EC
4. Financial control
5. Managing the supply base by use of teams and introduction of a Supplier Information Management System (SIMS) with EC.
6. Quality Management
7. New IT applications
8. Globalising maintenance, repair and operations (MRO)

The first project to impact on the Sun / Birkbys relationship was Planning and Demand fulfillment/replenishment. Its manifestation was the introduction of a demand trigger to ensure that Birkbys met Sun’s daily materials requirements within four hours of call-off.

As a result of these changes Birkbys realised that it had to align its operations.

*“A lot of people remarked that ‘your approach in this PTP is incredible’ whereas other customers, who will remain nameless, had the big stick approach. “If you don’t do this you will not be on our vendor base...” type of remark. Whereas we’re trying to share the benefits with them. I know from feedback, that Birkbys admit the scorecard we employed*



*has helped them with other customers, which is fine. If it makes them more competitive and healthy, it's good for us."* (BPRF,SM,96,10:3)

Birkbys subsequently introduced its own internal Process Simplification (PS) project to address this matter.

From a Sun perspective, PS was intended to give the company increased manufacturing flexibility; to give Birkbys wider vision; to reduce Birkbys inventory and to increase speed of components supply. This was to be achieved by operating an Inventory Pull System, from Sun down through the supply base, using visual or electronic signalling techniques. PS recognised that a level of inventory would be required at each stage of the process so as to service the immediate requirements of the next stage.

A Sun steering group was formed in July 1996 with the objective of meeting regularly and determining the strategic objectives for the two companies. At the same time, three improvement teams were formed and each was tasked with monitoring progress of one of the main initiatives, namely Resident Planner, Demand-Pull and Responsibility Matrix.

Teamwork was assiduously promoted in both companies.

*"It's very much team orientated now. In the past you could say the rewards went to the individual, but there's been a big change. You know, there's no letter 'I' in team. It's very much a teamwork thing and we're trying to promote that with new initiatives under way."* (BPRF,SM,96,10:3)

These were inter-organisational teams and comprised members from both Sun and the Birkbys organisation. The objectives of the Resident Planner team were to clarify the planner's own overall remit, operational responsibilities, communications links and his targets. These would enable all relevant parties to have a clearer picture of the demand, aid the PTP programme and at the same time increase confidence between customer and supplier.

The objective of the Demand-Pull team was to arrange for a system to provide a *kanban* signal that prompted a delivery from Birkbys to Sun's Livingston warehouse. Associated sub-objectives included devising a planning and inspection routine that involved zero inspection in the Sun facility, reduced inventory, and provided on time delivery from minimal stock levels.

The Resident Planner team's objectives were to develop a generic matrix that would clarify responsibilities and activities associated with supplier responsibility and the management of sub-tier suppliers. It was Sun's view that sub-tier supplier control should be "invisible" to Sun.

### **6.3.5 Personal Satisfaction and Motivation**

People were extremely motivated by the alliance in both organisations. Day-to-day jobs were getting easier to manage. There was a better understanding of how both organisational processes interfaced and the impact of one's actions on the other. Birkbys was now prepared to go the extra mile to satisfy the customer.

*"It becomes quite "people-dependent", as you'll find out. You can write and document as much as you want, but suppliers have to do a lot based on trust. Birkbys does a lot for us on the basis of a verbal agreement- "we'll work out later what it costs". And we've never had a problem. You don't get that if you don't get to know people."* (CM,SM,96,5:3)

Birkbys was now part of Sun's future and recognition of this fact was getting through to people.

*"There are clear messages about the long-term link with Birkbys. There's a group called the enclosure strategy team consisting of senior people from the US and UK which has mapped out the long-term future for suppliers who stay with us. Birkbys are part of that future and the message is there. In the five year plan Birkbys is identified as one of four enclosure suppliers world-wide."* (SE,SM,95,5:2)



*“We’re totally committed, unless they asked for something that’s impossible to do. We’d change everything round to suit them, even if it was at the expense of another customer. But I wouldn’t do that until I’d checked with the other customer, and tested the water – for example, how seriously it would impact on his business. But I look at it this way - if Sun came to me and said, “we need that...”, I wouldn’t question them. I expect them to be as fair with me as I am with them. But by and large, we are both very flexible.” (SM,BP,96,5:2)*

### **6.3.6 Summary: Transition to Stage III**

The alliance gave Birkbys the opportunity to significantly broaden its customer base and to offer higher value products, which positively impacted on its profitability. Birkbys became the sole UK supplier of enclosures to Sun Linlithgow and it was soon doing business with Sun in the United States.

Sun no longer had to find suppliers with technical and commercial expertise, or to get involved in seeking competitive tenders. This was a major target of the alliance strategy in 1991. Some years down the line, Sun was now able to access Birkbys accounts although it has taken Sun a long time to build up enough trust credits in Birkbys to get this information.

Reaching this point in the alliance had not been easy for either company and Sun had even considered withdrawing at an earlier stage. In late 1996, quality was once again a contentious issue due to Birkbys’ low grade on the Scorecard. For a period of time, Birkbys was no longer the preferred enclosure supplier for new products, although it continued to do work for Sun within the existing alliance model.

Sharing forecasting and scheduling information was critical to the entire process. Sun was sharing more and more market information with Birkbys and this gave the latter a better insight into future trends.



Nevertheless, misinterpretations and misunderstood communications had been a problem, especially when dealing with technical matters. Messages and intentions easily became distorted as information was passed, especially to persons not involved in the technical details. This kind of difficulty was resolved when the people directly affected by the activity got together to agree the way forward. A champion, or leader of the project, was needed, who would be kept in the picture at all times and who would in turn, pass on information to colleagues about things that might impact on their responsibilities.

Factors that contributed to the slow down in activity and the transition to *Stage III* as listed in table 6.5: -

Stage II	Transition Stimulus	Stage III, Transition Indicators
<ul style="list-style-type: none"> <li>• Compelling purpose</li> <li>• Conflict management</li> <li>• Interdependence</li> <li>• Learning and alliance skills</li> <li>• Joint decision making</li> <li>• Personal satisfaction and motivation</li> </ul>	<p>Crisis</p> <p>Management action</p>	<ul style="list-style-type: none"> <li>• Conflicting priorities</li> <li>• Unfinished actions</li> <li>• Questioning supplier accuracy</li> <li>• Lack of written procedures and vague targets</li> </ul>

**Table 6.5: Transition from Stage II to Stage III**

**6.4 STAGE III : Duration 1996-1997**

Up to 1996, the extent to which the companies had changed was considerable. The metamorphosis had involved a great number of people’s time and energy. Sun was now confident in Birkbys ability and Birkbys was accepting greater responsibility, allowing Sun to concentrate on more valuable work. However, the intensity of the relations began to wane between 1996 and 1997. Table 6.6 shows the main characteristics of Stage III.



STAGE III	
Characteristics drawn from Sun/Birkbys data	Dominant characteristics
<ul style="list-style-type: none"> <li>• Supplier changes and becomes more adaptable</li> <li>• Customer does not change</li> <li>• Some common values at operational level</li> </ul>	<ul style="list-style-type: none"> <li>• Adapting cultures</li> </ul>
<ul style="list-style-type: none"> <li>• HR practices not influenced by the alliance</li> <li>• Companies maintain own policies and procedures</li> </ul>	<ul style="list-style-type: none"> <li>• HR Assessment</li> </ul>
<ul style="list-style-type: none"> <li>• Customer commitment questioned</li> <li>• Questioning appropriateness of alliance strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Performance plateau</li> </ul>
<ul style="list-style-type: none"> <li>• Partners knowledgeable about each other's business.</li> <li>• Scheduling and planning information available</li> <li>• Open book costing</li> </ul>	<ul style="list-style-type: none"> <li>• Process understanding</li> </ul>
<ul style="list-style-type: none"> <li>• Customer focused</li> <li>• Increased technical and commercial know-how</li> <li>• Learning from each other and experience</li> </ul>	<ul style="list-style-type: none"> <li>• Reflection and learning</li> </ul>

**Table 6.6: Distilled Characteristics in Stage III**

**6.4.1 Adapting Cultures**

The two organisations had, in large measure, grown separately and inevitably each had developed business cultures independently. Working between these cultures has often been a source of tension. Sun was very multi-cultural and employed people who had come from different electronic companies, for example Apollo and Wang. Sun was dynamic, proactive, promoted employee flexibility and expected suppliers to be like its own people.

Sun wanted to use the capability of its supplier over a long period of time. It looked for key partners to grow and understand Sun's business and it expected suppliers to behave appropriately.



*“Compared to other employers, Sun looks after its employees very well. I also think we’re very fair with our suppliers although I sometimes think we’re too even handed with them. Also, you have to remember not to jump in with both feet. You’re going to be dealing with that supplier for a long time, so you try and maintain a reasonable relationship - never screaming and shouting.”* (BP,SM,96,4:2)

*I’m objective with my supply base, and I expect that back. Nobody ever said it was going to be easy. I think suppliers respect us because we’re more equitable. We have a better information flow in some of the new initiatives we’re working now. Some people in the electronic industry are very aggressive, but I don’t think Sun is hostile. I think most of the buyers in Sun have the same attitude, and try to keep some control and sanity.”* (BP,SM,96,4:2)

Birkbys’ way of working used to be at the opposite end of the spectrum to Sun (refer to 6.2.1, page 232). Its culture was that of a traditional company in a mature industry. The alliance with Sun started on the basis of compatible technologies and the cultural impact was not considered at all. It was only later that Sun realised some of the negative aspects of dealing with a long established company and this could be seen from the first score card results. Birkbys was regarded as slow to respond and not proactive enough.

Birkbys made great efforts to make cultural changes so as to fall into line with the working methods expected by Sun. Contrasts in culture continued to be alluded to but, over time, these became less frequent.

*“Changes that happened before didn’t seem to last - there were no foundations, nothing to make them endure. Birkbys now seem to mean business and aren’t playing at it. There have been big changes, mainly in attitude.”* (DTPM,SM,96,10:2)

*The impression you get is that it’s come from a change of attitude at the top. Although it is being driven downwards, there are a lot of the old guard about yet who resist change, especially on the shop floor.”* (DM,BP,96,4:2)



Birkbys had changed and was now very customer focused. Common values had developed and continued to be absorbed at production level due to frequent interaction with Sun. Both parties recognised the mutual benefits of schedule changes and information exchange as early as possible regarding supply problems.

#### 6.4.2 HR Assessment

Jobs had been affected by the alliance and it had also impacted on production and design work. The common theme however was responsibility devolved to everyone. Due to simplified procedures jobs had become less reactive and there was now more ownership and empowerment at the lower levels. Better planning had freed up resources and professional staff had had to deploy a different set of managerial skills in a bigger market.

Recognising the need for continuous training, Birkbys put a learning programme into action and, as a result, achieved an “Investors in People” award.

The alliance reward structure had not been integrated in line with the company-wide philosophy. For example, Sun people’s performance was measured in different ways. In Sun, if targets were achieved people received bonuses. If targets were repeatedly missed, then people were fired. It was very straightforward and Sun was justifiably described as a “hire and fire” organisation. This was recognised and accepted by Sun personnel.

*“There’s a strong sense of personal pride in people’s work and in how they achieve career progression as well. It’s generally the norm not to accept bad quality or bad workmanship or whatever else may not be up to scratch. We just don’t tolerate it.*

*It’s not about – “do I get rewarded at the end of it?” There are good team inducements and a lot of good personal incentives, but they’re icing on the cake. If you took them away results might drop by 20% but that’s about all. You’re left with 80% effectiveness because of the culture.” (DTPM,SM,96,11:3)*

### 6.4.3 Performance Plateau

Although performance had reached a sustainable high, by mid 1996, Sun's commitment started to come into question. Senior Sun personnel began to persistently fail to attend review meetings, despite the fact that the commercial review had been publicised as so important. It seemed that problems relating to the meetings were symptomatic of something stale in the alliance.

The actual basis of the alliance was being questioned, that is, "just how realistic are customer/supplier alliances?" It seemed that as long as objectives were being met then everything was all right. If not, then the relationship could easily go sour.

By this stage Birkbys was an entirely different type of company than in 1991 when all the changes started. Sun had driven Birkbys very hard and this was the case even more so now that it supplied both the UK and US. Management styles in the UK and US differed and Birkbys relations with Sun in the United States were more confrontational than with Sun UK. However, Birkbys was able to deal with this because on the most part that was how customers in the automotive sector behaved. What was happening at this time was that people who managed the alliance in Scotland were being put under pressure by their US counterparts. In considering the way it treated suppliers Sun UK had concluded that it is too "soft" and even too "generous".

Another worrying aspect was that "time windows" for the supply of information were becoming shorter and shorter. Sun was demanding information from Birkbys at ever increasing rates and if "the ball was dropped" then Birkbys would get no more business.

When the alliance began, Sun had only one major programme. Now it had three desktop PC's on offer. Whether it was secure in its preeminent position or not, Birkbys considered itself the only supplier in the enclosures market with the breadth and scope necessary to satisfy Sun Microsystems.



#### **6.4.4 Process and Cost Understanding**

The ally companies had to learn how to divide work between them to best effect. Within Sun, commodity managers were given the responsibility for the strategic aspects of the supply chain. Most of the commodity managers were based in the US and were in close touch with the engineering and design communities that initiate new product programmes. Commodity managers monitored and projected new product development within the company for the next 2-5 years, as well as anticipating implications of these plans on the supply base.

At the operational level, Sun had a team of supply engineers responsible for ensuring that current and potential suppliers were technically able to manufacture materials it required. Two Sun supply engineers were exclusively dedicated to Birkbys to develop its managerial capabilities. This helped Birkbys a great deal with sub-tier suppliers, for whom it had been made to take responsibility.

Inventory management was important to Sun, given that product life cycles were short and obsolete stock, wasteful. Sun employed buyer/planners to manage stock holding who were responsible for particular groups of components. They used the sales forecasts to plan material requirements which were then communicated to the supply base. The planners' role was to ensure that materials were available to support the production programme and, at the same time, to keep inventories low.

Sun had also created several internal institutions to support those in charge of different aspects of supply management. For example, a commodity team had been created for each major group of products comprising the commodity manager, the buyer/planner and one or more supply engineers. These teams held weekly internal reviews in order to report current activities to management.

Within Birkbys, the sales coordinator's job was to look after the customer and ensure that Sun got what it had ordered, at the right time. In order to do this successfully, materials supply had to be coordinated by Production, Purchasing and Transport.

Birkbys' tooling engineer's job was to anticipate potential difficulties and to ensure that moulding tools designed by Sun fitted Birkbys machines. The tooling engineer worked closely with Sun's engineers on tool design.

Birkbys made changes to its systems by forming a Business Electronics team which included a design engineer, a tooling engineer, a sales coordinator and a customer account manager. It also created a dedicated assembly cell with its own manager to deal solely with Sun products. The plant in Glenrothes initially only supplied Sun.

Familiarity with, and knowledge of, the complete process enabled people to look for potential areas of improvement up or down the supply chain.

*"I find that further back in the chain as well, suppliers need to let their guard down and to be open about the root cause of this or that problem. The way this will work properly is to knock down the barriers from around departments so that people can openly comment. Why are we making defects? Is it happening in our process or in yours? Openness is really what's going to make the relationship work."* (DTPM,SM,96,12:5)

In the early days of the alliance, Birkbys was not good at producing or collecting data and found it almost impossible to measure anything. This had all changed.

*"I try to collect data on everything - quality issues, faults and recurrences, so that I can tell purchasing the history of that particular problem. We also went on to a kitting system quite early, because previously people went to a bin to collect what they needed, and forgot to pick up half of what was required. Now exactly all the parts needed for a particular machine are gathered into one kit - and if there's anything left, somebody's made a mistake!"* (DM,BP,96,3:4)



One of the biggest problems for Sun was to pin-down how Birkbys actually costed its business. It was therefore impossible to make a comparison in order to ascertain if it was running the business competitively.

*“They would put all the overheads into the piece, whereas we would just have the manufacturing cost of the part. So the problem was over costing, it was attitudes and the way they wanted to do business. In fulfilling an order, they would just deliver when it was ready. On time and flexibility didn’t seem important. To us it was critical.”* (BP,SM,95,4:2)

Now it was a question of open book costing and Sun was only prepared to work with suppliers who provided all the information required. This enabled Sun to judge not only product cost, but also value for money.

#### **6.4.5 Reflection and Learning**

A great deal of learning by both organisations derived from the alliance. Sun spent a lot of time endeavouring to monitor the suppliers’ capacity to satisfy demand. Regular discussions with Birkbys reassured Sun about forward planning and at the same time emphasised to Birkbys the importance of accurate forecasting.

Birkbys was aware of Sun’s long-term aims and because of its own and Sun’s commitment, it was prepared to put resources at Sun’s disposal. Daily discussion about matters in detail and open communication channels built up a rapport, which reduced uncertainty and provided stability.

A new range of skills such as networking, creating solutions to problems of supply and anticipating trouble, had been learned by those closely involved in the alliance.

Sun had a greater appreciation of the supplier production problems, which added a realistic perspective to its outlook. Preconceptions of poor quality or perceived inflexibly had been reduced by educating Sun to appreciate the ally’s manufacturing difficulties.

Work at the interface between the companies had changed. People had a wider set of skills, especially as regards communication and there was more contact in general between Sun and Birkbys. Individual jobs had taken on a creative edge, not present before, which was conducive to enhancement of supplier capabilities and to the overcoming of supply blockages.

Sceptical voices could still be heard within Sun, mainly as regards the choice of partner and whether or not this was particular to the Sun/ Birkbys alliance was difficult to say. This led Sun to look at alliance strategies in general, in order to identify the best reasons for choosing a supplier.

*"It makes me think about the less successful partnerships we've ended up with. I wonder if we stay with people because of sheer inertia, as opposed to actively seeking an alternative. Obviously any such change would mean a loss of time and production, which is difficult."*  
(BP,SM,95,4:2)

Sun began to use the alliance strategy developed with Birkbys, when working with other global suppliers.

*"I think we've taken the model developed with Birkby's, of having a one-stop shop, with these guys responsible for the product, working much more on the basis of trust, sharing things with them, and getting them to share with us. A lot of what we've now written into the strategy document also goes for the global suppliers. It is a new way of working and we and Birkbys ploughed the first furrow."* (CM,SM,96,14:7)

#### **6.4.6 Summary: Transition to Stage IV**

The main problems concerning the Sun / Birkbys alliance in *Stage III* are listed as follows:-

- A growing agenda of unfinished actions.
- Vague targets and success criteria.



- Basic information unavailable and paucity of written procedures.
- New project and product names, inconsistent or unavailable, resulting in confusion.
- Policies not understood in some parts of the chain.
- Relations mostly dependent on individual effort. While some aspects of the alliance were managed at a series of monthly review meetings, most depended on individuals and ad hoc meetings. One meeting, to review the alliance, was cancelled after unrelated organisational changes altered the duties of a key member.
- Influence of corporate policies. Several projects were stalled or obstructed by wider corporate policies or became tangled up in other issues, for example the alliance agreement.
- Conflicting priorities. Actions needed to coordinate the chain depended on other departments aligning with the alliance objectives. For example, the progress in addressing EDI and delays resulting from the colour sampling, affected quality.
- Birkbys was not sufficiently empowered to make decisions and required more authority.

Despite the foregoing, the alliance had required people in the two companies to coordinate their work. Tasks and responsibilities for developing new products were shared and this reliance on the other intensified as the relationship developed. Birkbys offered its expertise during the preliminary design work, whereas previously Sun would have presented Birkbys with a design and simply asked it to model the tools with which to mould the enclosure.

As well as developing close personal contacts, the companies created a series of joint institutions to manage the relationship, such as regular meetings at which issues arising would be dealt with. Some of the objectives, responsibilities and features that constituted the transition to Stage IV can be summarised as: -

- Sun and Birkbys plan management of sub-tier suppliers
- Regular meetings with minutes recorded and actions timeously distributed
- Common matrix of current and future products
- Responsibility for material forecasts passed to Birkbys and sub-tier suppliers
- Demand-pull ground rules set out what Sun expected from Birkbys in terms of delivery
- Clear statement of Sun's corporate policy e.g. colour sampling procedures



Along with formal procedures, personal networks had been built up and this had led to quicker responses, as people used their own contacts to help deal with issues.

Birkbys had gained greatly from association with Sun. Over the years it has become more efficient with increased capability and in turn Birkbys had been able to influence sub tier suppliers to improve performance. Table 6.7 illustrates behaviour prevalent during Stage III and IV transition.

Stage III	Transition Stimulus	Stage IV, Transition Indicators
<ul style="list-style-type: none"><li>Adapting cultures</li><li>HR assessment</li><li>Performance plateau</li><li>Process understanding</li><li>Reflection and learning</li></ul>	<p>Crisis</p> <p>Management Action</p>	<ul style="list-style-type: none"><li>Increased responsibility devolved to supplier</li><li>Regular meetings</li><li>Review of current and future products</li><li>New team projects</li></ul>

Table 6.7: Transition from Stage III to Stage IV

6.5 STAGE IV: Duration 1997-1999

Table 6.8 shows the main characteristics in *Stage IV*.

STAGE IV	
Characteristics	Dominant characteristics
<ul style="list-style-type: none"><li>Supplier changed dramatically</li></ul>	<ul style="list-style-type: none"><li>Cooperating cultures</li></ul>
<ul style="list-style-type: none"><li>HR practices not influenced by the alliance</li><li>Companies maintain own policies and procedures</li><li>Problem solving, influencing and analysis skills</li></ul>	<ul style="list-style-type: none"><li>Developing alliance skills</li></ul>
<ul style="list-style-type: none"><li>Joint projects produce innovative solutions</li></ul>	<ul style="list-style-type: none"><li>Joint innovation and continuous improvement</li></ul>
<ul style="list-style-type: none"><li>Partners knowledgeable about each other's business.</li><li>Scheduling and planning information available</li></ul>	<ul style="list-style-type: none"><li>Joint learning tacit and explicit</li></ul>



STAGE IV	
Characteristics	Dominant characteristics
<ul style="list-style-type: none"> <li>Improved planning and information sharing</li> </ul>	<ul style="list-style-type: none"> <li>Process alignment at interface</li> </ul>
<ul style="list-style-type: none"> <li>Customer focused</li> <li>Increased technical and commercial know-how</li> <li>Operational objectives achieved</li> </ul>	<ul style="list-style-type: none"> <li>Strategic review</li> <li>Step change (the dominant characteristic has been embodied in strategic change)</li> </ul>

Table 6.8: Characteristics in Sun / Birkbys Alliance in Stage IV

6.5.1 Cooperating Cultures

As previously mentioned there has been considerable cultural incompatibility at the interface between the two organisations. However, Birkbys rose to the challenge and had changed from being rather slow and old-fashioned to a business that responded quickly to its customer’s requirements.

*“If you are used to a fast changing culture, you deal with the negative aspects because it’s in your nature. Some organisations find fast track completely alien and think it creates more problems than its worth. I would say that most companies fail to change because they try to do too much too soon.”* (BPRF, SM, 97, 8:2)

6.5.2 Joint Tacit and Explicit Learning

There had always been changes in Birkbys but not as frequent or radical as over the three years. *“The company has been very good at training - they’ve made us able to cope with change.”* (SC,BP,97,4:2)

*“In the beginning Birkbys had no notion how the relationship would end up. I think we found out as we went along. It is amazing when you consider what we did in the early days, compared to what we do now - we couldn’t imagine it at the time. Building the bits into the units before they actually leave here is something we’ve learned by being with Sun.*



*We've been able to pass this learning on to our other customers. Also we couldn't have imagined we'd be dealing with America the way we do now - it was way beyond our dreams."* (SC,BP,97,2:4)

### **6.5.3 Process Alignment at Interface**

In mid 1996, the alliance was enlarged with the introduction of GE Plastics, who supplied Birkbys with resin for moulding. In the past, Sun dealt directly with GE Plastics and once the Birkbys and GE link had been established, this part of the supply chain interface worked well and proved beneficial.

*"Another difference is getting advance warning about plant and manufacturing problems. The more notice we can get the better. With some suppliers, when we don't get deliveries and run out, it leads to panic stations. We ring them up and they say, "Oh, has nobody told you? I thought somebody in production was going to give you a phone!" But if people warn you something is going to affect your delivery in a month's time, you can look around the market to see if there's something else you could use. It's always going to be beneficial if a supplier is being proactive in those terms."* (MM,BP,97,3:3)

The alliance transformed the attitude of sales people working in Birkbys.

*"Put it this way. If you asked any of our sales people what the lead time is on any of our products, they wouldn't be able to tell you, because they don't know. They don't know how long it takes to make our products, or what is critical to production. That doesn't stop them making delivery promises and it means I have to hold a large inventory in case I have to deal with these situations. That impacts directly on my supplier."* (MM,BP,97,5:4)

The improved planning and forecasting system dramatically affected both Sun and Birkbys. Sun, Birkbys and GE plastics have improved although it still is Birkbys practice to hold stocks of GE products, as a back up.



*“Although I have suppliers that deliver within 4 or 5 hours I still tend to hold a safety stock. I do JIT deliveries on certain key accounts but don’t with GE Plastics. There isn’t any reason why we couldn’t do that with GE, if we had a decent planning system. It’s very easy to do on some of the polymers, which are regular runners. You can’t plan your supply where things are very up and down and people can’t decide when they are going to load something into the schedule. We hold too much inventory in finished stock because we lack a good production planning system. We tend to make for stock, rather than making to order, which is wrong.” (MM,BP,97,5:4)*

#### **6.5.4 Strategic Review**

By December 1997 the Sun / Birkbys alliance was well on the way to achieving a number of major goals. These included: -

- Lead time reduced from eighty six days to twenty five days
- 20% improvement in productivity
- 100% customer order fulfillment, i.e. the ability to supply a customer immediately on request.
- Continuation and development of the suppliers’ collaborative model

Birkbys now received supply information on a regular basis. The new Glenrothes facility optimised operations as expected and it held a minimum level of stock to satisfy the company’s service level agreement. This gave Birkbys four hours to respond, from receipt of the warehouse agent’s demand, to Frans Maas delivery to Sun. Frans Maas commitment, to deliver enclosures on demand, enabled Sun to be less involved in day to day business and allowed it to turn its attention to supply management as a whole.

*“Our people are more productively employed - there’s a lot more work we can do, now that we’ve streamlined the process. That makes us more competitive and it will also improve the quality of work for people to do.” (BPRF,SM,97,10:1)*

### 6.5.5 Summary

In the first instance, there was a real leap of faith by the companies. Since they first decided to work closely together, the Sun / Birkbys relationship progressed significantly and this had brought tangible benefits to the partners. These benefits were supported by structural changes in both companies, especially as they affected people, business processes and technology.

Sun provided valuable expertise and support to help Birkbys develop its capability in the electronics industry.

It took time to change attitudes and ways of working and there had been problems and disappointments all during the alliance. Sun was not prepared for the slow speed of learning. Also it took Birkbys time to adjust and to understand where they would fit in.

The Sun/ Birkbys alliance was at its peak between 1996 and 1997 when Birkbys won the "Best Sun Supplier Award". Joint teamwork in the Resident Planner and Demand-Pull projects contributed greatly to this achievement.

Commercial and organisational changes within the entire Sun organisation were contributory factors to the alliance slow down.

Supply managers with an international responsibility replaced Sun commodity managers and as a result geographical proximity was lost and supply management methodology changed. Birkbys' only contacts in Sun had been local UK quality managers and the scorecard was not as rigorously applied in respect of the American work because Sun's US counterparts, did not put such importance on the score card as the UK company.

The result of these changes was that there was no longer the continuous pressure to improve together. The scorecard had been a very important control mechanism and performance metric used extensively by Sun, Linlithgow. At the time, Birkbys had



welcomed the introduction of the scorecard because it improved supplier capabilities and helped the drive for innovation. More importantly, the scorecard gave Birkbys a view of Sun's strategic direction and regrettably this window was now closed. The disadvantage was that Birkbys and Sun could not calculate in advance future resource requirements or harmonise customer and supplier strategies.

Initially, cultural differences were very obvious. Sun was seen as the modern, dynamic company and Birkbys, a slow moving anachronism, reluctant to change. Birkbys personnel were neither used, nor empowered, to respond to problems quickly.

In this alliance, customer domination was very evident, nevertheless many in Sun considered the supplier had been allowed too much freedom. Despite such internal arguments, the Sun organisation was determined to succeed in developing supplier relations over the long-term.

Birkbys had changed more than it would ever have dreamed, which is a testament to the people in the company and the faith of Birkbys management in Sun's future vision. The first two years of the alliance were taken up with Sun nurturing Birkbys and slowly getting to understand the supplier's cost structure. Trust between the two allies gave Birkbys the confidence to divulge cost information. Perhaps this is the point when the alliance actually began; at the point of open book accounting.

The operation had allowed Birkbys to take on more value-adding work and it was a completely different organisation now than in 1991. Birkbys had transformed its attitude with regard to quality, flexibility and continuous improvement.

*"Although we are constantly getting better, we are continually reviewing the process to improve even further. Day-to-day demand replenishment is being systematically managed."* (BPRF,SM,97,4:4)

Continuous improvement is now a way of life for Birkbys. *“It helps us tremendously if somebody can propose solutions to problems, when you meet. They can also give us indications on price movements, to help us plan. If we’re told there’s going to be an increase in prices in x month’s time, we can then tell the customer so that he can budget accordingly. It doesn’t look good if we fail to give the customer notice. It’s always better if people can anticipate that sort of thing.”* (MM,BP,97,3:2)

The resident model had been developed since the early days and now there were several resident engineers on site. People whose responsibilities were intertwined were closely situated, for example the physical distance between a planner and a scheduler might only have been six feet. Face to face communication was now seen as vital, in sharp contrast to the past when people communicated via spreadsheets. A planner used spreadsheets as his primary source of information and, although absolutely necessary tools in themselves, a spreadsheet was a very clumsy way to convey complex ideas. Human interaction was irreplaceable and most supply chains broke down through inadequate or lack of human interaction.

The biggest problem with the resident model seemed to be that of confidentiality. There were times when Sun staff discussed, in private, sensitive matters and the Resident Planner knew what the talk was about. This led to role insecurity, for example when the individual did not know the context of the conversation and was obviously not welcome to participate. Are they talking about me? Are they criticising my work? Consequently, the perception was that a lot of closed-door discussions were taking place and this might have affected self-esteem.

The resident planner had to be someone with authority, who had external contacts, who was able to network and who understood how the two organisations worked. In 1998, Sun upgraded the resident to managerial level.



Birkbys and Sun both underestimated the skills required to do the intermediary's job successfully. These included a whole range of aptitudes from interpersonal, dealing with outsiders, to the ability to influence management in his own company.

*"A resident planner needs to be able to initiate a concept and take it from there. If he doesn't have the management skills you have to step in to sort out the detail. This causes morale and performance issues and suppliers took some time to understand that."* (EMSCM,SM,99,4:9)

On some occasions Sun reached conclusions that the supplier did not share. *"I don't believe the partnership between supplier and customer can be an equal one. When I talk to a supplier, I am the customer and expect to be treated like one. I am not saying that gives me license to get what I want every time, but a lot of suppliers believe that success is winning the argument, rather than satisfying the customer."* (EMSCM,SM,99,3:6)

In the past, Sun elevated the status of the supplier and even though it was obvious they were not on a par, nevertheless they were at least treated as if they were. When Sun dealt with its customers, it was usually very clear who the customer was.

Sun intended to continue collaboration but at that moment the US company largely decided this strategy. Nevertheless opportunities may have existed in the UK to bring suppliers in at an earlier stage of the planning cycle.

A strategy team and a commodity team were set up in 1998, bringing in people from various product groups. If there was a difficult job to be done, they would do it. Sun's management had a genuine interest in business alliances and in learning. In the company Sun recognised that it had to include a wider constituency in the future to sort out problems. Sun's entire worldwide organisation had undergone two internal changes since 1997. The Sun operation has become less functionally orientated and works using cross-functional product groups. By the year 2001, Sun intended to re-organise its entire supply chain,

rather than just the supply base and this would mean fewer points of contact between Sun and suppliers.

There continued to be two different schools of thought in the company, on the subject of supplier collaboration. On balance the predominant view was that competition was healthy and it questioned why Sun should be putting all its eggs in the one basket.

*“There is definitely a difference of opinion within the organisation about suppliers. I believe that we have spent too much time with the wrong suppliers. The cost to us has been too high, not in all cases, but mostly.”* (EMSCM,SM,99,6:4)

## 6.6 CONTINUING CONCEPTUAL DEVELOPMENT

Having analysed all the secondary data for this project, it was the author's objective to re-establish contact with key participants in both companies who had either moved to other organisations or were dispersed across the globe.

Information was further garnered by resorting to e-mail exchanges and telephone calls. From these it was ascertained that Sun and Birkby's were no longer involved in a close alliance relationship and as a consequence of this new information, a further stage was added to the conceptual framework. This stage, named *Stage V*, is discussed in the following section.

*Stage V* describes the time when the particular alliance is no longer deemed appropriate for the customer, his supplier or both. Questions considered were: - *What caused the alliance to end? Do the players continue to trade?*

The Sun / Birkbys alliance went through four pivotal periods, that might fairly be termed critical, although the first crisis of confidence was the most serious. The latter follow a period of uncertainty and the resulting change triggered upsets of differing degrees of severity.



The first crisis of confidence occurred in the very early stage of the Sun and Birkbys alliance. Neither organisation had experienced working with the other and even although Birkbys had a highly developed standard of quality control, obviously it was not rigorous enough for Sun.

Significantly, it transpired that many of the quality issues were not merely the result of Birkbys ineptitude but were of Sun's own making. Improved forecasting and scheduling information, as well as direct assistance from Sun supply engineers helped Birkbys comply with Sun's service level requirements.

Sun personnel did not readily admit that they could in some way be held responsible for the suppliers' performance. The second crisis was a result of Birkbys' misunderstanding due to lack of communication as well as Sun's non-attendance at alliance meetings. The direct effect was that Birkbys was judged to be performing poorly against the score card criteria and resulted in it being taken off the preferred supplier list for a time. Advice and support from Sun rectified the situation, however the matter could have been managed in a more efficient manner.

Birkbys resumed its position of preferred supplier to Sun and consequently was given more and more new product work. Already operating on stretched resources and unwilling to turn business away, Birkbys became overloaded. This situation also overwhelmed suppliers as they could not increase their resources quickly enough to keep up with Sun's demands and the outcome was translated into poor scorecard results.

The alliance was never based on any formal agreement or ground rules and the strategy that developed was based on emergent issues rather than planning. Subsequently, this strained the alliance as the supplier was taking on more work and becoming increasingly dependent on Sun.

Day to day operations were seen as working well. Birkbys was responsible for sub tier supplier management and consequently Sun personnel were physically and intellectually withdrawing from the alliance. What would be the future of the Sun / Birkbys alliance?

As a direct result of the alliance, Birkbys had developed from a traditional, UK engineering business to a major company operating in an international market. For its part, the Sun Linlithgow plant had followed its intended strategic direction, developing high value products at a planned rate of progression.

Sun used the Birkbys/Sun strategy to develop other customer supplier relations. Initiatives first introduced, such as the resident planner role, had been improved and served as the model with other Sun suppliers. Birkbys has also used the learning gained from the Sun alliance to manage its other customers and sub-tier suppliers.

The close association between Sun and Birkbys had ceased. For Sun, the alliance had achieved an objective of outsourcing low end value work. For Birkbys, the company had doubled its turnover during the alliance period and was now in a position to work directly with the US company. Although Sun Linlithgow and Birkbys had terminated their Scottish association, Birkbys was now working with Sun in the United States as a direct result of the alliance.

Given the difficulty in capturing complex social and interpersonal relations using tightly structured research methods, both deductive and inductive methods have been employed. These methods were used to achieve the research objective of understanding alliance relationships as they mature with the passage of time. Gaining access to three alliances, allowed the investigator to explore and capture diverse events and their effect on players in dynamic, changing business environments. Stages or characteristics may not be plainly evident as each alliance was at a different level of maturity and more importance may have been given to certain aspects rather than others. Nevertheless the work described in detail how characteristics were manifested within and between the alliance stages and how they



influenced implementation and progress. Table 6.9 summaries the development of the framework in the cases.

	Stage O	Stage I	Stage II	Stage III	Stage IV	Stage V
IDV/Killeen		X	X	X	X	
SCA	X	X	X	X	X	
Sun/Birkbys	X	X	X	X	X	X

Table 6.9 Stages Present in each Case

Table 6.9 indicates that both the Supply Chain Alliance and the Sun/ Birkbys agreement had a period of pre-alliance analysis. In the light of these findings, the data from the IDV/ Killeen alliance was revisited to search for evidence of a preliminary stage prior to the alliance being formally recognised. The following describes activities of IDV and Killeen *apropos* and prior to signing the partnering agreement in August 1994.

6.7 STAGE I IN THE IDV/KILLEEN CASE

6.7.1 Alliance Agreement

IDV and Killeen both signed a partnering agreement at the outset of the alliance. Although informal, the agreement provided the guidelines within which the alliance would operate for the first three years. This stated the objectives to be achieved by each party as well as the team structure and membership.

6.7.2 Cultural Compatibility

There was no attempt to consider cultural compatibility, although both the companies had a similar heritage and open style of management. Both companies had flat organisational structures and were autonomous with respect to their corporate owners.



6.7.3 Environmental Analysis

*“At the beginning of the partnership we identified this 20% gap. Killeen realised they’d a great deal to lose and had to do something about it. A very strong competitive element motivated and focused everyone and at the end of the day the hoped for results were delivered.” (B,IDV,96,7:1)*

Market analysis brought up a number of challenges. Of particular significance was the fact that IDV’s box supplier was 20% uncompetitive compared with UK suppliers, and that in the corrugated market, price variations had usually been passed onto the customer without adverse reaction. There were also concerns about quality, for example, case failures, production stoppages and print quality. The small runs that IDV demanded from Killeen contributed to the malaise. Also, there was a large amount of finished and redundant stock. All these factors, as well as internal IDV year end pressures and poor communication, resulted in unwelcome high costs and waste. Both IDV and Killeen objectives are summarised in table 6.10 below:-

IDV Objectives	Killeen Objectives
<ul style="list-style-type: none"><li>• Greater competitiveness</li><li>• Change of behaviour</li><li>• 20% cost reduction</li><li>• Board quality and print quality improvements</li><li>• Logistics improvement</li><li>• Smooth planning</li><li>• Eliminate year end pressures</li></ul>	<ul style="list-style-type: none"><li>• Improve competitiveness</li><li>• Secure customers in volatile market</li><li>• Gain competitive edge in terms of print quality</li><li>• Promote print innovation</li><li>• IDV used as the vehicle to express and achieve the above aims</li></ul>

Table 6.10: Alliance Objectives



#### **6.7.4 History of Working Together**

IDV and Killeen had been doing business together for over twenty years, albeit in a traditional way. Surprisingly, prior to the alliance, both companies had little personal contact with the other despite the fact that the two factories were only half a mile apart.

#### **6.7.5 Partner Selection**

IDV managers took a pragmatic view of partnering and held that alliancing, based on willingness and trust, had to be used as a management tool to improve business and develop supplier capabilities in terms of cost reduction and R&D opportunities.

*“Choosing an alliance partner was a learning exercise for me. Having identified which suppliers are strategic, you ask yourself which ones have the resources to make it worthwhile cultivating the relationship. It’s no use embarking on a strategic relationship with a supplier; if you simply buy a commodity. You’ve got to look at where there’s room for development, room to jointly invest in either processes or procedures or products, so that both parties benefit and resources can be devoted to it.”* (BD,IDV,96,7:2)

#### **6.7.6 Previous Experience of Partnering**

Although business relations between IDV Operations and Killeen were of long standing, there was a strong recognition by Killeen that it had to consolidate its support of IDV, which it valued as a very significant customer.

Other parts of IDV had claimed some success in implementing collaborative ways of working. Notable in this regard was J&B Whisky, which was operating in a somewhat similar environment. IDV Europe was also keen to build up a team of supply chain experts to develop and spread best practice throughout the IDV group of companies.

At the same time, people in other parts of the Smurfit Group, Killeen's parent company, were investigating similar issues with customers and overall the circumstances at the time were favourable for partnering. The situation was undoubtedly helped by the fact that IDV's Procurement Director and the relatively new MD of Killeen had personally established a very good working relationship.

Other factors in the background included the German National Marketing Company's (NMC's) experience as regards a more open approach to inventory management. This involved IDV examining computer records appertaining to the distribution channel with the aim of smoothing out production fluctuations and allocating stocks in a more coherent way (see appendix VIII). Although at an early stage, allied to this was the introduction of Distribution Requirements Planning Software at Gilbey's of Ireland Sales for direct interaction with IDV, as well as the development of computerised planning and control systems within IDV itself.

Persistent efforts to encourage more open communication and greater interaction in and between the NMC's and operating companies also helped to change adversarial behaviour of the past.

In 1996, "Operation Phoenix" was set up at corporate level to determine a strategy for integration of systems and reduction of the number of warehouses. The objective was a more rapid response to customer demand and to streamline the whole European logistics operation. This involved examining the physical location of distribution centres, analysing how information was gathered, in particular forecasting, and the way data was communicated back through the supply chain to the operating companies. Operation Phoenix was a comprehensive logistical review of the process from receipt of an order to delivery to the customer.

*"It's a huge logistical project and will significantly reduce warehouses in Europe. I think ultimately it'll extend down the supply chain to the vendors, instead of having a manufacturing plant that attempts to do all things, that is, tries to deliver volume, mix SKU's as well as gives rapid service. It's impossible to do all of these together. It may*



*mean that there is a plant within a plant, specifically designed to produce a variety of SKU's and deliver a very rapid service with short lead time, and in another part, a facility designed to generate one SKU at volume."* (PD,IDV,98,2:4)

Killeen's previous attempts at partnering had been unsuccessful, so this new Killeen / IDV example created little interest within the Smurfit group. Smurfit managers had been given a high degree of autonomy and could run their plant any way they thought fit, as long as margins continued to meet the Group's expectations. The manager at Killeen went ahead with the alliance and it was only after it had been going for some years that Smurfit corporate began to take notice.

### **6.7.7 Strategic Intent**

The significant event behind the proposal to take a partnering route was an IDV benchmarking survey of other IDV operating companies. The purpose of the exercise was to evaluate who was buying what in terms of corrugated packaging and at what price. This survey, subsequently termed "the blue book", indicated that Killeen was 20% less competitive, compared with other UK suppliers of corrugated packaging.

Switching immediately to a new supplier was a real option and there was considerable pressure within IDV to do so. However a number of people in IDV Operations Ireland felt that if this happened they would lose all the experience and reliable service they were used to getting from the local supplier.

Initially IDV's overriding motivation for the alliance was to reduce cost.

*"The whole point of the exercise is to get closer and closer to someone like Killeen, and to take out costs."* (PD,IDV,97,2:1)

The original partnering agreement in August 1994, not only referred to the need to reduce base costs by the 20% target but it also said that savings above this figure were to be shared

at a proportion of 70:30 between IDV and Killeen. Raw material costs, recognised as highly volatile, were to be subject of separate negotiation.

IDV Operations vision is to establish "World Class" performance, especially as compared with other parts of the IDV group.

Killeen's goal was to retain its reputation for quality print and packaging and to increase its share of the Irish market. Killeen took a pragmatic view of the benefits of the partnering relationship and decided that the best tactic was to become "tied-in" to IDV,

*"We're in the partnership because of the trade with IDV for more than twenty years. The more dependent they are on us the more secure we are, which is as good as having competitive advantage. The fact that friendships have built up, and loyalty is stronger, in itself is very helpful."* (FM,K,97,3:4)

After discussion with Killeen, IDV's preferred solution was to work together to beat the competition via an alliance route. At the time neither company knew what it was getting into.

Other areas that needed attention were identified, including quality. IDV had been experiencing difficulties on the production line that had caused stoppages and also some box failures, indicating that the case quality was below standard. Apart from this issue, the companies wanted to move forward in terms of product development.

*" We took stock of business between ourselves and noted a couple of areas needing attention. One was quality, as we were experiencing difficulties on the production line and the other was field failures where cases were proving unfit for the intended purpose."* (PD,IDV,97,2:1)

Killeen utilised flexographic printing and, because of the importance of the packaging for retail display, it was decided that ways to improve print quality should be investigated. Killeen's particularly talented print team had won company awards for innovative use of



the flexographic techniques. Killeen’s aim was to attain lithographic print quality using the flexographic process.

*“There was also an R&D part to it. Killeen had just put in a flexographic postprint machine that had great potential in terms of improving print quality, so we decided we had a good change to take a further innovative step.” (PD,IDV,97,2:2)*

6.8 CONCEPTUAL DEVELOPMENT

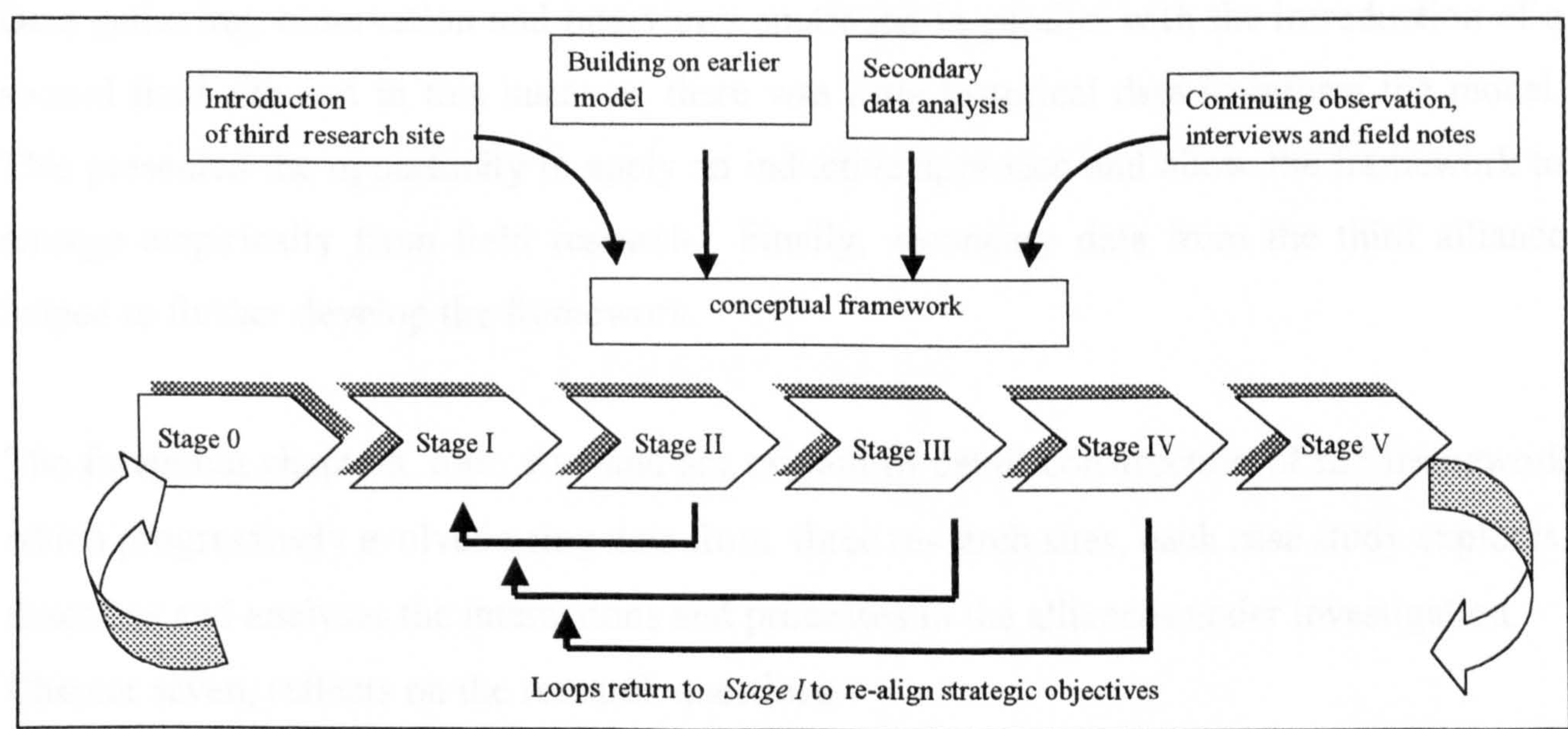


Figure 6.1. Six Stage Framework of Alliance Development

Each case study has led to the refinement of a framework which describes the progressive development in the alliances investigated as illustrated in figure 6. 1

The feedback loop demonstrates the non-linearity and emergent quality of the alliance process. Regardless of the stage, there was a continuous requirement for the partners to assess and review performance against the planned objectives. In this way, each alliance was managed proactively with adjustments made as and when required. That is, the strategies were dynamic and with each iteration, partners learned how to deal with complex situations more effectively.



The diagram also illustrates, by the lower curved arrows, that when companies withdraw from a particular alliance, the knowledge gained may be used to generate other alliances. In this event, the cycle ending in *Stage V* would begin again at *Stage 0* with a new partner.

The framework was advanced using a number of methodologies. In the first instance the early conceptualisation was built upon a review of supply chain alliance literature and secondary data and provided a foundation to refocus the research aims and objectives.

Data gathering, observation and interviews continued in parallel with the introduction of a second field site and in this instance, there was little historical data to inform the model. This presented the opportunity to apply an inductive approach and allow the framework to emerge empirically from field research. Finally, secondary data from the third alliance helped to further develop the framework.

The foregoing chapters, four, five and six explain in detail construction of the framework which progressively evolved using data from three research sites, each case study explores, describes and analyses the interactions and processes in the alliances under investigation. Chapter seven, reflects on the research questions:-

7. How do alliances evolve over time?
8. Are progressive stages evident as the alliance matures and in what way does one stage differentiate itself from another?
9. Given that the degree of interaction, learning and innovation may alter as the alliance relationship develops, what characteristics are evident within each of the stages ?
10. Are certain characteristic more important in one phase of the evolution than in another
11. What factors identify the transition from one stage to another?
12. What factors trigger stability and instability in alliances and what happens when the alliance ends?

And discusses and compares the cases described in chapters four, five and six.



12. DISCUSSION - PART I

13. CONCEPTUAL DEVELOPMENT

Figure 7.3 illustrates the conceptual development of the early conceptual framework. The process begins with the identification of the problem and the selection of the research objectives. This is followed by the development of the conceptual framework, which is then tested and refined. The final stage is the development of the research instrument, which is used to collect data for the study.

Figure 7.3 illustrates the conceptual development of the early conceptual framework.

Figure 7.3 illustrates the conceptual development of the early conceptual framework.

1. What is the purpose of the study?

2. What are the research objectives?

3. What are the research questions?

4. What are the hypotheses?

5. What are the variables?

6. What are the independent and dependent variables?

7. What are the control variables?

8. What are the confounding variables?

9. What are the limitations of the study?

10. What are the strengths of the study?

## Chapter Seven

### Discussion - Part I



Figure 7.3. Early Conceptual Framework



7.0 DISCUSSION - PART 1

7.0.1 CONCEPTUAL DEVELOPMENT

To remind the reader, the research objective for this thesis was to investigate the notion of phased evolutionary development in strategic alliances. As an additional aide-memoire figure 7.1 illustrates the initial framework established from the exploratory phase of this research (refer to chapter 4.0, page 121).

This chapter aims to address specifically the following questions :-

1. How do alliances evolve over time?
2. Are progressive stages evident as the alliance matures and in what way does one stage differentiate itself from another?
3. Given that the degree of interaction, learning and innovation may alter as the alliance relationship develops what characteristics are evident within each of the stages ?
4. Are certain characteristic more important in one phase of the evolution than in another
5. What factors identify the transition from one stage to another?
6. What factors trigger stability and instability in alliances and what happens when the alliance ends?

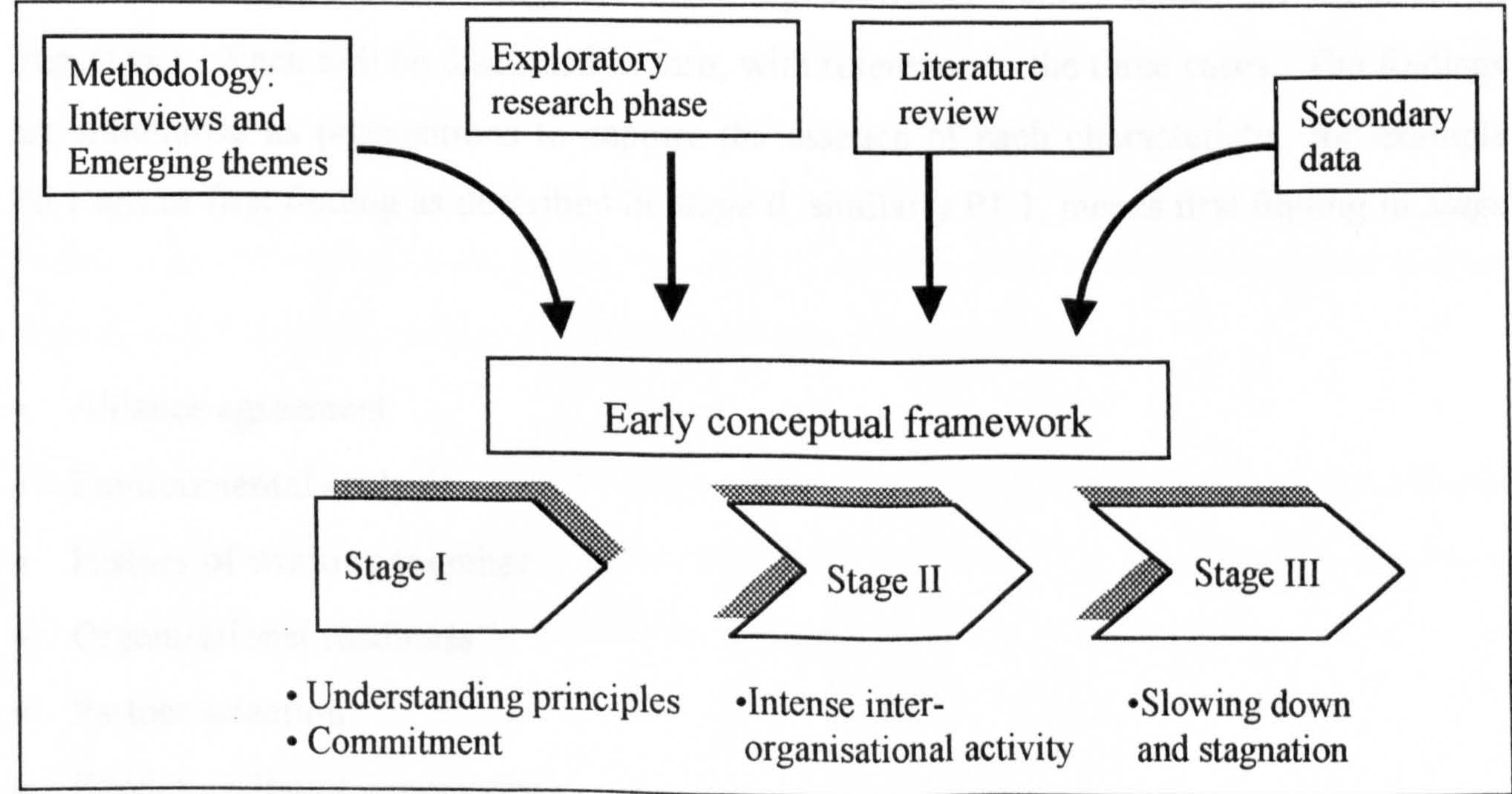
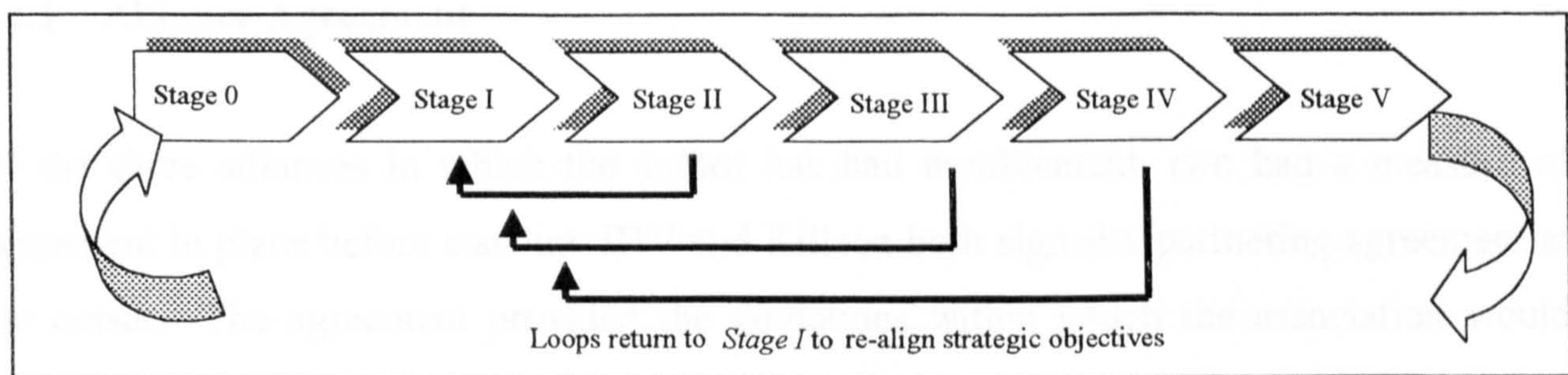


Figure 7.1. Early Conceptual Framework





**Figure 7.2: Progressive Relationship Development in Alliances**

Figure 7.2 illustrates the framework developed from data in three case studies. On the basis of findings, answers to research questions posed at the outset of the study substantiate the characteristic features within each stage and whether it is possible to recognise the signs when an alliance is in transition.

The answers to questions 1, 2, 3 and 4 are discussed in the following sections 7.1 - 7.5 and questions 5 and 6 in 7.6 - 7.8.

## 7.1 STAGE 0

The main attributes in this stage are listed alphabetically below, rather than in order of importance. Each will be discussed in turn, with reference to the three cases. The findings are summarise as propositions to capture the essence of each characteristic, for example P0.1 means first finding as described in *Stage 0*, similarly P1.1, means first finding in *Stage I*.

- Alliance agreement
- Environmental analysis
- History of working together
- Organisational readiness
- Partner selection
- Previous alliance experience
- Strategic intent



### **7.1.1 Alliance Agreement**

Of the three alliances in which the author has had involvement, two had a measure of agreement in place before start-up. IDV and Killeen both signed a partnering agreement at the outset. The agreement provided the guidelines within which the association would operate for the first three years. This stated the objectives to be achieved by each party as well as the team structure and membership. The concordat reflected the culture of the alliance partners and the degree of autonomy that each organisation had vis-à-vis the parent group (refer to chapter 6.7.1, page 271).

UESL had to demonstrate to the tender board a clear business case for taking the alliance route and the UESL alliance contract was designed to facilitate outsourcing in a controlled and measured way (refer to chapter 5.1.1, page 174).

In contrast, in the case of the Sun Microsystems and Birkbys, there was no long term alliance agreement in place and although Sun's unequivocal strategy was to form closer relations with selected suppliers, it did not communicate this to Birkbys (refer to chapter 6.1.1, page 225).

From the outset, master/servant relations predominated in all three alliances and the suppliers were not confident enough to reveal to the customer what the terms demanded meant to their business. The outcome was that before the alliances were able to gain momentum, the shortcomings of the agreements, whether tacit or explicit, surfaced and the contracts had to be adjusted to make the goals mutually beneficial.

***P0.1 Agreements provide the structure and ground rules fundamental to the alliance future, therefore compiling the alliance agreement is a joint activity otherwise differing expectations may inhibit progress.***



### **7.1.2 Environmental Analysis**

This looks at changing market demands, customer needs, new technology and monitors competition. The results of such a search are extensive and complex. Changing markets, globalisation, speed of change and fierce competition have had very significant effects on the future of the businesses featured in the three studies.

IDV's (later UDV) consolidation of its logistics and distribution network and later Diageo's drive towards globalisation meant that competition and innovation were the most influential factors justifying the alliance route. Although IDV's operations in Ireland enjoyed considerable autonomy prior to the merger, Diageo's objective of doubling shareholder value in three years meant that sourcing had to be based on worldwide competitiveness. Retaining the packaging supply contract in Ireland was no longer an option for Killeen, unless it could be proved to be the cheapest.

Also, the world wide drinks market was changing. In the past, companies were prohibited from advertising on radio and television and these laws had been relaxed. Consequently, UDV marketing no longer had to depend solely on the brand image generated by the outer case and it could consider simpler packaging designs and alternative suppliers (refer to chapter 4.4.8, page 163; 6.7.3, page 272).

Similarly, the fast, highly competitive industry that Sun Microelectronics was in, meant that constant market surveillance was imperative to stay ahead of the competition (refer 6.1.2, page 226).

Over supply and the consequent oil price slump in April 1998 had a huge impact on the UESL, SML and ARRC alliance. The strategy adopted embraced an outsourcing policy and to gain momentum the alliance had to be seen to be the lowest cost service provider.

Similarly, supplier companies had to be aware of environmental and market intelligence and it was noteworthy that the small though entrepreneurial haulage company, ARRC, was pre-eminent in obtaining this kind of local knowledge (refer to chapter 5.1.2, page 174).

***P0.2 Market analysis is required to be rigorous and ongoing in order to ensure that the cooperative strategy is the most appropriate and will encourage continuous improvement.***

### **7.1.3 History of Organisations Working Together**

IDV and Killeen have at least two decades of experience working together and Baileys (IDV) is a very profitable brand with a worldwide reputation. Similarly, Killeen was well known for innovative print skills and up until 1994 there was no real attempt by IDV to source an alternative supplier for its high profile box. During this time contact between the two companies was kept at arms length with no transfer of technological or process knowledge and consequently there was no question of joint innovation (refer to chapter 6.7.4, page 273).

In the Sun and Birkbys case, collaboration began in 1991 although neither had any experience of the other company prior to that time. Birkbys was chosen by Sun because of its apparent technological expertise and its location (refer to chapter 6.1.3, page 226). Sun was unaware of Birkbys limitations and the latter had to come up to the Sun quality standards very quickly. As a consequence of Sun nurturing its supplier from the start, there was an immediate transfer of knowledge and innovation from Sun into Birkbys.

Shell (UESL) had worked with both Seaforth Maritime (SML) and ARRC prior to the alliance, but the two contractors had not worked together and in fact were competitors. The contract between UESL and ARRC was traditional, but ARRC was small and entrepreneurial in spirit and provided a trouble free service. Contractors like ARRC, whose safety performance was exemplary, protected UESL's high profile reputation and there was a sense of trust between it and ARRC management. It was quite a different relationship in



UESL's other contracts and ARRC worked well with UESL to improve transport efficiency using initiative and innovation. This never altered throughout the duration of the alliance.

A comparison suggests that the organisations examined started roughly from the same point, despite a history of previous working relations. Indeed, past experience may have required unlearning in the first instance, to break down old attitudes and perceptions. With regard to Sun and Birkbys, Sun immediately began by helping Birkbys to stretch its capabilities.

***P0.3      The degree of communication and interaction that characterise an alliance are not usually encountered in a traditional contractual relationship. Therefore prior working experience, in the traditional sense, may not necessarily be critical to a successful alliance.***

#### **7.1.4 Partner Selection**

Partner choice was measured against criteria imposed by the customers in all three cases. IDV used a conventional portfolio matrix based on high risk and availability of alternative resources.

Sun Microelectronics selected Birkbys on the presumption that a UK company could perform to the same standard as a counterpart in the USA. Birkbys location in Britain was favourable as it reduced transportation and lead times. Other major considerations were Birkbys technical expertise, its innovative culture and sophisticated R&D facilities (refer to chapter 6.1.4, page 227).

UESL's selection was based on commercial awareness, and depended on its estimation of the technical risk and the potential added value of the UESL/ SML/ ARRC alliance. ARRC's reputation for quality and efficiency was a large selling point in favour of the joint tender to the Shell tender board (refer to chapter 5.1.4, page 175).

In all cases, partner selection was carried out with an eye on supplier reputation and performance. IDV, Sun and UESL all helped to support their suppliers. They did not do this prior to the start of the agreement but were notably considerate throughout the alliance in trying to understand incidents and appropriate actions from the ally's point of view.

***P0.4 Over time, the position of the partner shifts as the market and competitors change. Maintaining strategic differentiation forces both customer and supplier to jointly produce solutions that demonstrate both lowest cost and added value.***

Shared values fostered a positive attitude regarding the alliance and greater commitment by the partners. The process can be made smoother if the companies involved subscribe to a similar set of values, hold similar views on professional excellence and are motivated to achieve the same goals. This was clearly evidenced in the match between IDV and Killeen and in the UESL and ARRC link, although there seemed to be little attempt to consider cultural compatibility when selecting the partner. Obvious cultural diversity between SML / ARRC affected the alliance so much that one or two individuals could not resist malicious threatening and petty squabbling. Trust between some senior figures in SML and ARRC was missing and UESL seemed powerless to resolve this issue. It's attention was on reorganisation and dealing with immediately pressing issues.

***P0.5 Cultural compatibility is not seen as an important criterion when selecting partners, although in the early stage of an alliance, cultural compatibility can help the companies develop a sense of purpose through shared values and beliefs***

### **7.1.5 Previous Alliance Experience**

In all cases, the companies had little or no experience of alliances and were breaking new ground. IDV had some knowledge of a mainland European alliance but this did not impact on the Irish partnership (refer to chapter 6.7.6, page 273).



Sun regularly sent teams into supply companies to help define processes and investigate problems, however, this activity did not constitute an alliance commitment (refer to chapter 6.1.5, page 228).

Shell had numerous alliances going on at the same time throughout the organisation but there was no attempt to institutionalise a process to share or transfer learning. The UESL, SML, ARRC alliance was stimulated by a Shell senior manager's experience of an offshore alliance (refer to chapter 5.1.5, page 177).

In all cases senior executives, convinced that cooperative working was a better way to do business, led the alliance. In the first instance, it was the blend of authority and organisational hierarchy that provided the appropriate conditions for positive action. However, in the long term, conversion had more to do with personal characteristics, leadership, integrity, and ability to influence and negotiate.

Although all three cases were relatively successful alliances, in that they achieved the objectives, many senior managers remained suspicious. There were perceptions that suppliers were using this way of working to exploit the customer and vice versa, although the only true measure of success was financial. Competitive tendering and traditional contracts were considered by some as more acceptable as they apparently safeguard organisations from possibilities of exploitation.

***P0.6 Managers who have experienced successful alliances will continue to champion change. Individuals not institutions transfer learning between alliances.***

### **7.1.6 Strategic Intent**

Competitive market pressure was the initial motivation in all cases and the original aim was to reduce costs and add value. Strategic intent stimulated a series of activities targeted towards objectives and tactics within the partner organisations, namely cost benefit

analysis, internal persuasion, environmental analysis and ultimately discussion and negotiation with the potential partners. Strategic intent was important and because of the considerable effort and commitment prior to the alliance, participants were likely to be more sympathetic to difficulties at the earlier stages and find ways to move the process forward.

In every case costs were significantly reduced and the suppliers improved their productive capacity and efficiency. However, a notable feature was that, on the most part, the alliances were left alone by their respective parent corporations to manage the strategy.

In IDV this all changed with the Diageo merger when a new level of complexity was introduced. The pressure to reduce costs and to source from the most competitive supplier was overriding. The business case was no longer an issue between IDV and Killeen, in Ireland, but a much bigger opportunity for IDV and the Jefferson Smurfit organisation (refer also to chapter 6.7.7, page 275).

Interestingly, Sun Microsystems changed from global to local sourcing in order to improve customer service and reduce lead times, and then returned to global. To reduce logistics costs further and to supply Sun's needs, Birkbys built a plant in Scotland located near to Sun (refer to 6.1.6, page 229).

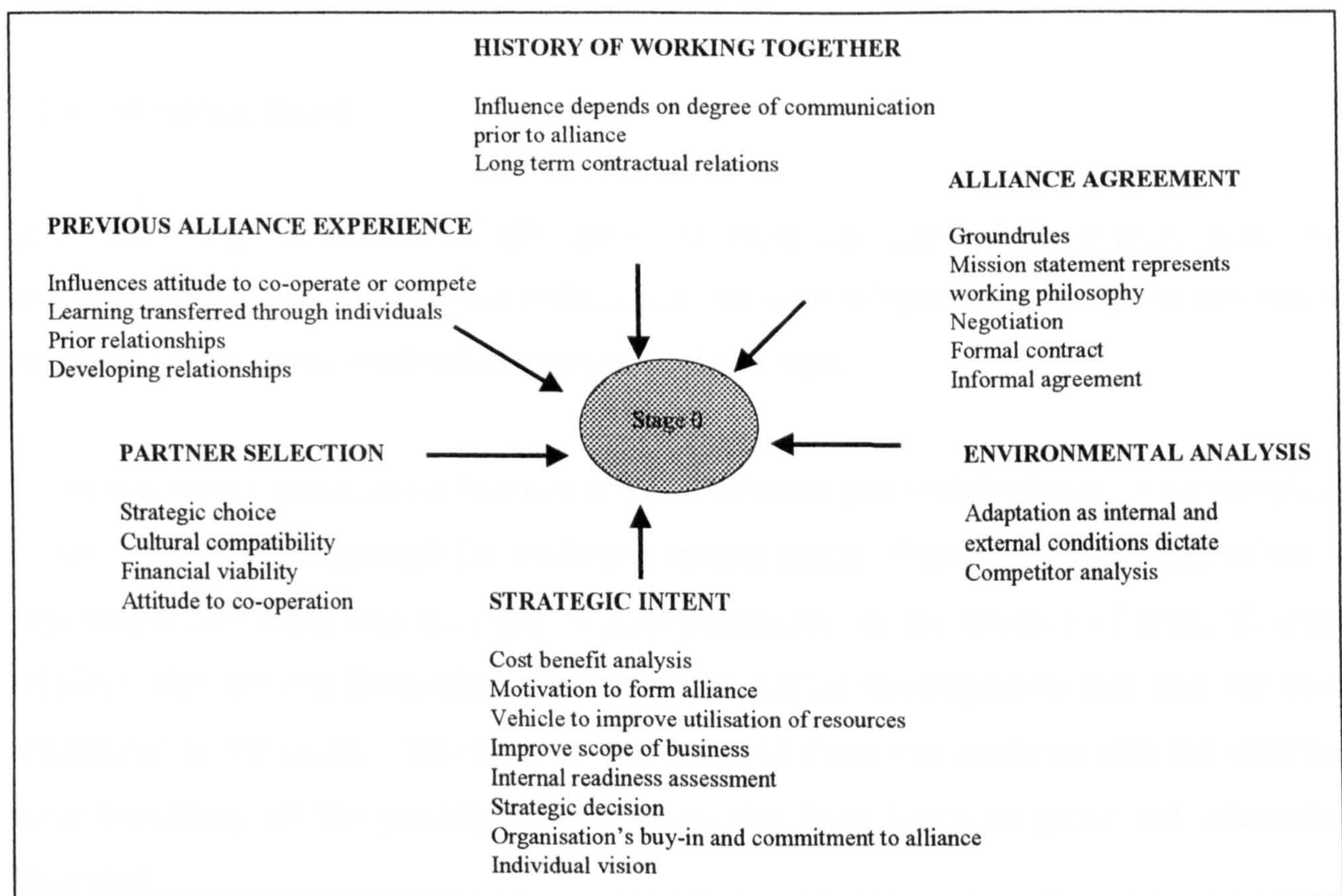
UESL's original aim to optimise assets and cut costs to internal customers had been put under greater pressure by over supply in the period to 1998 and the consequent low price of oil. The intention was also to change the way the organisations had been working, that is, away from the customary "control and tell" contract, to a style of working where all parties could mutually benefit (refer to chapter 5.1.6, page 178). As with Diageo, the main concern was cutting costs and UESL was involving contractors to help meet its corporate budget targets.

In summary, the power of the market underpinned the trend towards collaboration and customers realised that they must use suppliers' knowledge to achieve targets.



**P0.7** *In response to both external and internal changes strategic intent evolves to identify new priorities. A flexible alliance strategy can adapt quickly, yet maintain a cooperative philosophy as changing internal re-organisation and market conditions dictate.*

Figure 7.3 illustrates the thematic grouping of distinctive features and sub criteria of findings in *Stage 0*.



**Figure 7.3 Thematic Grouping in Stage 0**

## 7.2 STAGE I

The main characteristics in *Stage I* as described in the individual case studies are arranged below in alphabetical order. The comparison that follows discusses how influential each aspect was in the individual cases and how they relate to the conceptual framework.

- Building trust



- Commitment and leadership
- Communication
- Co-ordination and control mechanisms
- Learning
- Performance metrics
- Resource planning
- Setting objectives

### **7.2.1 Building Trust**

The underlying motivation of all parties to trust was rational behaviour, based on anticipated reciprocity. This was reflected in the early alliances stages by fluctuations in the degree of inter-personal and inter-organisational trust.

Given that trust remains at the heart of all good business and social relations, an atmosphere of trust provided the ground for achieving mutual goals. Trust was a basic ingredient in negotiation and there was no hope of accommodation in the absence of trust. Trusting relations also created favourable conditions for further developments that had not been anticipated at the outset. However, it was not until there was evidence that the alliances were benefiting all the participant companies that trust began to grow and interaction increased.

In all cases reciprocity was demonstrated by considerate behaviour, which helped realisation of tangible benefits such as increased profit or reduced costs. Consequently it was as much an ingredient of cooperation as a product of it and trust gradually increased as people got to know each other better. All three alliances were able to resolve issues by promoting more communication and information sharing, thereby reducing opportunistic behaviour, which is the antithesis of trusting conduct.

The alliances were tricky to manage, particularly at the outset when inevitably frustration was experienced from lack of immediate results. Especially in the SCA, it was difficult for



UESL managers to understand that they had to relinquish some control, so as to foster freethinking. Inter-organisational teams required a measure of autonomy and this caused problems as individual managers resented losing control over logistical activities.

From a strategic perspective, teamwork was part of the alliances' response to environmental challenges and it involved building competencies and capabilities, for example sharing information among teams and negotiating for resources. Individual trust was improved because of the boundary spanning activities of the teams, growing familiarity with others, interaction and freer communication.

Trust helped to stabilise relations and promote exchanges of information and imparting of knowledge. This confidence between the companies in the alliances was an essential element in periods of crisis. In each alliance, communication was the foundation of confidence and sharing technical assistance was instrumental in increasing this trust between the partners as well as in reducing opportunism. Often projects involved sharing of confidential information and this could be difficult. In the case of IDV and Killeen, the degree of information disclosure between senior management helped the teams break down communication barriers and resulted in cooperation at a senior level, which cascaded into the teams (refer to chapter 4.1.1, page 129).

Trust was erratic in the Sun / Birkbys alliance and expectations of performance were greater than actually realised. Both companies took time to learn what each anticipated of the other and this was further complicated because Sun had not revealed its long term plan and Birkbys position within it (refer to chapter 6.2.1, page 232)

As far as the SCA in Aberdeen was concerned, erratic trust was due to the perceived ambivalent attitude of one of the contractors towards UESL as well as unfulfilled expectations of performance. On the most part concerns about trust affected relations and interaction between high level managers, while on a day-to-day basis supervisors working together at the operational level were often confused by management behaviour (refer to chapter 5.2.1, pages 183).



By the end of the first stage, people were achieving their expectations overall, reciprocity was encouraging trust building and personal working relations were improving. Most significantly, research skills within the alliance teams were growing and there was a heightened commercial awareness and customer focus as a result of the alliances. Table 7.1 illustrates factors which influenced trust in the alliances studied.

Factors Affecting Trust	
Increase	Decrease
<ul style="list-style-type: none"><li>• Communication between individuals</li><li>• Disclosure of confidential information</li><li>• Inter-organisational team activity</li><li>• Experience of working with each other</li><li>• Partnering agreement with explicit objectives and ground rules</li><li>• Visible senior management commitment</li><li>• Shared technical assistance</li></ul>	<ul style="list-style-type: none"><li>• Ambivalent attitude towards one's partner</li><li>• Performance expectations not reciprocated</li><li>• Under-resourced partner</li><li>• Closed culture, suspicion</li><li>• Not understanding partner's vision</li><li>• No alliance agreement or ground rules</li></ul>

Table 7.1: Summary of Factors Affecting Trust

*P1.1 Trust is at the heart of alliancing and it evolves over time during successive stages of cooperation. In times when trust was at a high point the alliances achieved mutual benefits, exploited opportunities and encouraged innovation and creativity. However, when trust was low, conflict situations occurred.*

7.2.2 Commitment and Leadership

In all the studies cited, the leaders were visionaries who fostered a sense of commitment in all the players. Their stoical support was a feature of these alliances and they possessed the authority and charisma to influence critical stakeholders (refer to chapters 4.1.2, page 127; 5.2.2, page 184; 6.2.2, page 232).

Commitment and leadership was individually driven, as opposed to being explicit it the corporate strategy. The roles that leaders took were common in each case, as shown in figure 7.2. They set the initial objectives, steered the change process, communicated the



vision, influenced stakeholders, negotiated for resources, brought key individuals together and encouraged ownership and commitment.

Common Leadership Roles
<ul style="list-style-type: none"><li>• Allocating resources</li><li>• Setting preliminary objectives</li><li>• Nurturing commitment</li><li>• Steering the change process</li><li>• Influencing and negotiating</li><li>• Managing stakeholders</li><li>• Coaching and mentoring</li></ul>

Table 7:2: Summary of Common Leadership Roles

The importance of staff not directly involved cannot be understated, as their lack of cooperation affected communications and in turn the degree of information exchanged. Commitment and leadership from top management must be evident, continuous and clearly articulated to every level.

*P1.2 A committed and motivated manager at the higher echelons of the organisational hierarchy is critically important to implementation of a successful alliance.*

7.2.3 Communication

In all three cases the single biggest strength of the alliance was that freedom of communication and information sharing started almost immediately.

The IDV/ Killeen steering committee encouraged an open environment in which communication and information sharing was promoted. Communication channels were opened up for the first time. This, together with the support of senior managers and adequate and well selected resources, motivated the teams (refer to chapter 4.1.3, page 128).



On the whole the story was similar in the Sun and Birkbys alliance and in the SCA between UESL, SML and ARRC. Sun personnel spent much time in Birkbys aligning the two processes and consequently this meant a rapid transfer of technical know-how from Sun into Birkbys. Daily interaction and communication improved between ARRC and SML when personnel co-located at Torry dock and Altens base (refer to chapter 6.2.3, page 232; chapter 5.2.3, page 185) .

A potential source of conflict was when the partners were unsure how much and what information could be disclosed to an ally. This was not given any weight in any of the alliances during the early stages and only became an important factor later on. For example, it arose when the Birkbys resident planner was introduced into Sun, when the contractors were allowed access to the Shell management information systems and when IDV gave Killeen's box transparencies to a competitor supplier for trials. In these instances the intellectual property of the companies within the alliances was made vulnerable and led to questions of ethics and opportunism.

The reason for this oversight may be that at the outset of the alliance, the parties did not appreciate the extent to which allies would change and grow in terms of knowledge and capability development. It was not a consideration in the early stages when it was more important to get the project off the ground and running.

In all cases, informal networks were being built up, and people were talking to each other who would never have done so in the past. Individuals were now able to go directly to the proper person and this was significant because personnel in supplier organisations usually did not talk to the customer directly. Suppliers were slowly becoming more focused on understanding customer needs. Open communication encouraged learning and transfer of know-how and information sharing promoted accuracy and long term planning. The start of value creation between the allies was when inter-organisational teams worked on projects to bring down costs, eliminated waste and improved quality.



In all three alliances, one of the biggest concerns was the difficulty in cascading these principles through the organisations. The importance of the workforce in general, and in particular those not directly involved in the alliances was often overlooked. On the whole, regular and support staff cooperation was only possible when people understood what the alliance was trying to achieve and where they fitted in. Table 7.3 illustrates factors that helped and hindered inter-organisational communication.

Alliance Communication	
Helps	Hinders
<ul style="list-style-type: none"> <li>• Scheduling and forecasting information</li> <li>• Open and free dialogue</li> <li>• Joint planning</li> <li>• Interpersonal relations to develop informal networks and enhance process understanding</li> <li>• Transfer of explicit and tacit technical knowledge</li> <li>• Increase of trust</li> <li>• Increase in commitment</li> </ul>	<ul style="list-style-type: none"> <li>• Unclear roles and responsibilities</li> <li>• Discomfort sharing confidential information</li> <li>• Opportunistic behaviour</li> <li>• Misunderstanding</li> </ul>

Table 7.3: Summary of Alliance Communication

*P1.3 Inter-organisational communication and learning is critical as the exchange of technical know-how rapidly increases process understanding.*

### 7.2.4 Co-ordination and Control Mechanisms

By the end of *Stage II*, a number of procedures were already in place such as a log book to track IDV call-offs, a daily IDV forecasting meeting was attended by Killeen personnel and inventory management procedures were being structured. On the most part, there was little documentation of team activities and few records kept (refer to chapter 4.14, page 129).

In contrast, Sun Microsystems kept a very tight control on Birkbys by requiring Sun’s approval for any changes to processes or tooling, mainly to help Birkbys learn the Sun standards. It was at this time that it became apparent Birkbys was not solely to blame for



co-ordination and planning problems. In fact Sun was at times the perpetrator of the problems that it complained of (refer chapter 6.2.4, page 233).

Interestingly, there was a similar realisation by IDV and Killeen and also the players in the SCA alliance, although some time later in that case. The point was that when suppliers were acting on insufficient information, they could not provide the level of service required by the customer, due to poor communication and quality problems within the supply chain. On the most part customers felt absolved of any responsibility for problems they were experiencing with their suppliers.

With regards to information technology and its exchange, IDV and Killeen's systems were incompatible, although Killeen was already successfully operating an EDI link with another of its customers. If this weakness in the area of electronic communication had been addressed sooner, improvements could have been made and the consequent benefit could only be guessed. As it was, electronic synergy was not considered a priority and the EDI link was not established for many months.

Information technology was also to play an important role in the Aberdeen SCA. UESL launched a new SAP information management programme at the same time as the start of the alliance. This was a source of problems in the early days because people had not been properly trained and this led to some corrupt data. Although the contractors shared the same technical interface as UESL this seemed to be a big problem from the outset. Nevertheless at the end of the day, the system was improved so that it was capable of producing concise and accurate reports (refer to chapter 5.2.4, page 187).

As might be expected, use of up to date technology and information systems was not an issue between Sun and Birkbys. Table 7.4 summarises the co-ordination and control mechanisms used by each alliance.



Mechanisms of Co-ordination and Control			
	IDV/ Killeen	Sun/Birkbys	SCA
Contract	•		•
Steering committee	•		•
Inter-organisational teams	•	•	•
Supplier education		•	•
Compatible technology		•	•
Management report			•
Independent alliance audit			•

**Table 7.4: Synthesis of Mechanisms of Co-ordination and Control**

*P1.4 Control mechanisms evolve as the alliance matures. These range from control by the customer, or alliance initiator, to joint control of cooperative activities.*

**7.2.5 Learning**

As has been previously described, prior to these alliances there was no specific and direct interaction between any of the companies. Meetings were infrequent and there was little, if any, knowledge of the other’s processes. When the alliances began, project teams played a critical role in analysis and evaluation of the companies’ strength and weaknesses and as a result process learning was virtually immediate at the start of each of the alliances.

At the start, innovation did not predominate in people’s minds and they concentrated on getting to know each other. However, the environment established provided the freedom to think creatively and the teams came up with new ideas and commercially sound opportunities.

From a strategic perspective, teams responded to environmental challenges by building new competencies and capabilities. Creation of knowledge, technological accumulation and social learning built favourable conditions for innovation and exploration between the allies.



Despite the fact that perfection was never achieved, in general the IDV/Killeen alliance conditions provided a healthy basis for learning and on the whole people were very receptive to change and new ideas. The emphasis was on developing a long-term relationship and all participants were motivated and enthusiastic to this end. Autonomy in both plants gave the directors scope to divert time and resources to the relationship (refer to chapter 4.1.5, page 130).

Similar scenarios were evident in the case of Sun/Birkbys and also the SCA (refer to 5.2.5, page 188; 6.2.5, page 234). As Birkbys came up to the Sun standard, they were quickly given more responsibility, by increasing the scope of the process and by adding new tasks. Birkbys very quickly adapted and expanded its capabilities. Although the SCA could be said to be facilitating process learning, this was in circumstances of considerable background turbulence and there was little time to really promote learning. Table 7.5 shows the impact of learning in the alliances in this early stage.

Impact of Learning Within Purpose
<ul style="list-style-type: none"><li>• Process understanding</li><li>• Flaws in process become clear</li><li>• Team skills develop</li><li>• Recognise need to address cost drivers</li><li>• Sharing of planning and scheduling information</li><li>• Learning how to manage the alliance</li></ul>

Table 7.5: Summary of Impact of Learning within Stage I

*P1.5 Learning is immediate, although the partners are so consumed by learning to work together that the impact of knowledge transfer is not fully recognised.*

**7.2.6 Performance Metrics**

IDV and Killeen’s early paybacks held out the promise of even greater prizes. The alliance objectives remained unchanged and the inter-organisational teams regularly assessed their progress against targets. This stimulated new ideas and constant adaptation, as the process



developed and objectives were achieved. Performance was directly measured against the impact of the box price reduction (refer to chapter 4.1.6, page 131).

All of Sun suppliers' performance was measured against the scorecard; a set of comprehensive parameters created by Sun. This was completed every quarter and provided the means for continually checking improvements by Sun and Birkbys, although at no point was joint performance considered. When Birkbys failed to come up to an acceptable level this triggered corrective action whereby Sun worked with Birkbys to resolve the issues. In this sense, Birkbys was involved with Sun harmonising expectations and developing processes common to them (refer to chapter 6.2.6, page 235).

With regards to the Aberdeen SCA, the measures included in the initial alliance contract were also based on the customer's performance criteria. However, it was not long before these had to be re-defined because they were liable to misunderstanding and different interpretation (refer to chapter 5.2.6, page 189).

In all three cases, suppliers or contractors did not measure their internal performance at all or did so unconvincingly and for this reason there was considerable confusion about cost and overhead allocations to customers. This triggered a reaction and both the customer and supplier began to investigate cost drivers. The supplier was entering into new realms of learning.

***P1.6 Jointly agreed performance measures harmonise expectations between the partners and on-going monitoring and evaluation provides the basis for auditing progress.***

## **7.2.7 Resource Planning**

In all cases the managers were prepared to invest resources and assets in the alliance although the full associated costs may not have been apparent at this time.



In terms of team membership, candidates came mainly from higher management levels. As the alliances built up momentum, an inordinate amount of time was spent by team members in project activities and this stretched scarce resources. Board level commitment was imperative to encourage people to work energetically between day jobs and alliance projects. With the passage of time improved communication enabled all alliances to manage resource requirements to good effect.

Both IDV and Killeen had made considerable investment in the collaborative effort and although the teams sometimes struggled to cope with daily duties as well as alliance work, everyone was very motivated to make the venture succeed. This was especially so because benefits of shared planning and scheduling information were almost immediately realised. Hence, Killeen began to plan its capacity and foresee overtime requirements with the latter representing a significant factor in Killeen's overheads(refer to chapter 4.1.7, page 131). Birkbys, SML and ARRC were positively affected by similar information sharing (refer to chapter 6.2.7, page 237).

Sun and UESL purposely intended the alliance to free up resources from daily operations to work that would add greater value to the organisation, This effective use of resources enabled suppliers to increase capacity, while customers re-allocated scarce resources from operations to more strategic planning and developmental roles (refer to 5.2.7, page 190).

In this way alliances helped accessed new resources and capabilities in order to develop innovative methods, products and organisational systems.

***P1.7 More effective use of resources enables suppliers to improve efficiency and increase capacity, while customers can re-allocate scarce resources from operations to strategic planning and development.***



### **7.2.8 Setting Objectives**

At the outset of the alliances there was little understanding of the other players' industries or generally how markets influenced these companies' behaviour in terms of governance and pricing structures.

Having ascertained the market conditions, IDV chose the alliance route, retaining the business within the Irish domain. Project teams were the vehicles to bring about the fundamental changes that IDV had in mind. Senior management knew what it wanted to achieve, and the participants understood the motivation behind the alliance (refer to chapter 4.1.8, page 133).

Sun Microsystems on the other hand, failed to articulate its vision for the alliance to Birkbys and how it intended the companies to work together. In the first instance, very little consideration had been given to the overall strategic direction. Birkbys had no idea of the extent that it would have to change to meet Sun's requirements. This lack of appreciation strained relations from the outset, particularly as Sun soon set about demanding changes to the supplier's procedures, which surprised Birkbys but which was something Sun was used to doing (refer to chapter 6.2.8, page 237).

Both Sun and UESL specifically made it clear that they wanted to withdraw from operational and execution issues and to concentrate on planning and strategic implementation. At the outset senior managers therefore felt frustrated as they got increasingly bogged down in operations. Sun resolved this by promoting supplier development once they were confident in Birkbys and vice versa. Similarly, UESL gave SML greater autonomy when SML demonstrated improved performance, supported by favourable monthly reports (refer to chapter 5.2.8, page 190).

***P1.8 Allies need to continually assess the strategic position of the alliance, the capabilities of the partners and to modify short-term tactics in order to meet changing circumstances and maintain long-term objectives.***



Figure 7.4 summarises the main characteristics in the *Stage I*.

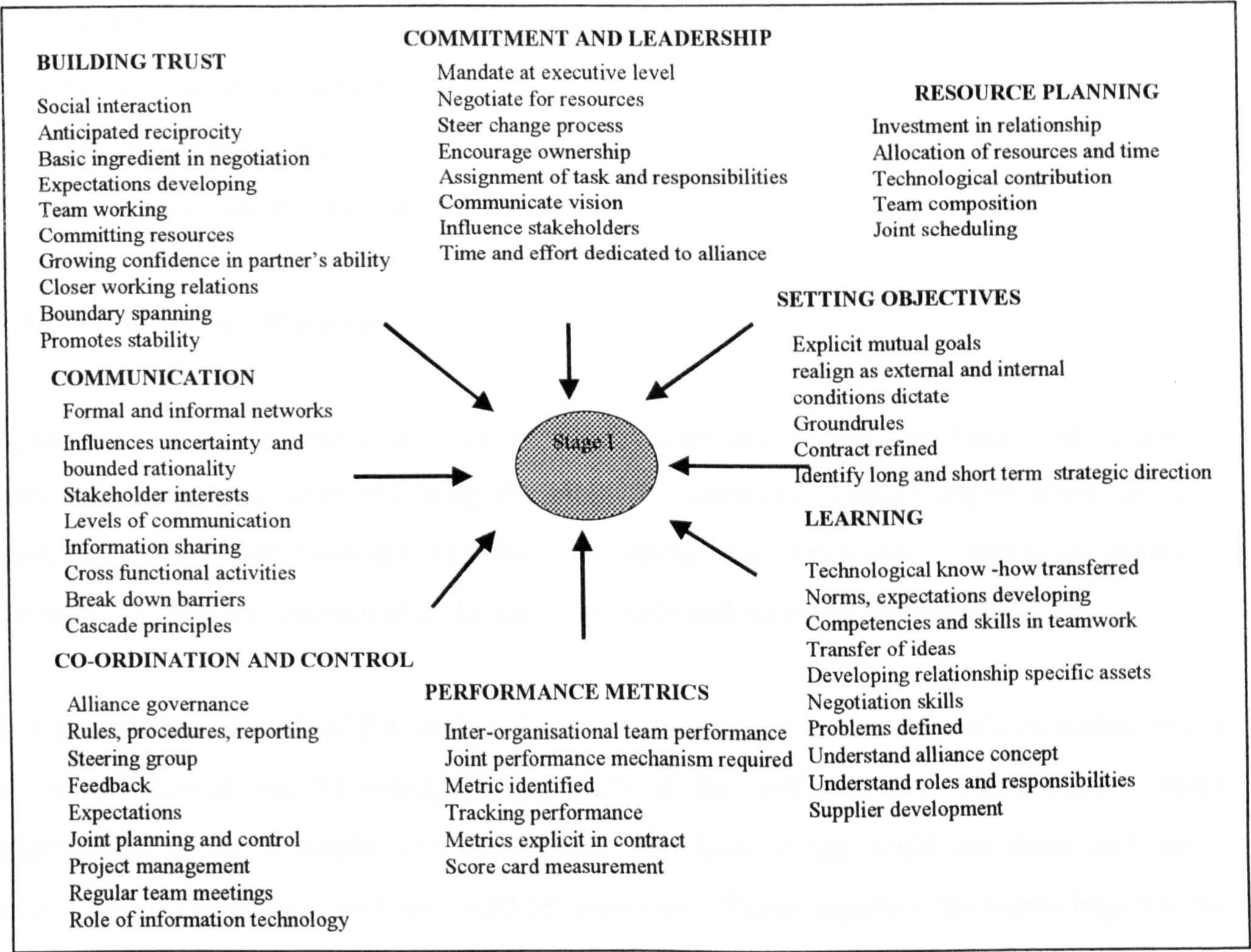


Figure 7.4: Thematic Grouping in Stage I.

7.3 STAGE II

This was a period of intense activity by alliance participants, concurrent with strong support from management champions. During this stage problems were shared and mutual ownership nurtured. Direct benefits of better communication included improved quality, quicker delivery and shorter lead-time. Important characteristics from *Stage I* were continued throughout the alliance period. *Stage II* was a time of intense interaction between the partners mainly as a result of inter-organisational teamwork. Distinctive features of this stage are listed alphabetically as follows.



- Compelling purpose
- Conflict management
- Interdependence
- Learning and alliance skills
- Joint decision making
- Personal satisfaction and motivation

### **7.3.1 Compelling Purpose**

In all three cases confidence grew as the parties were able to draw on hard information on which to base long term planning decisions. Customers' gained appreciation of their suppliers' ability and business was daily becoming more organised. Increased dialogue between the partners promoted a change of attitude and working behaviour.

It was apparent in each of the studies that teams began to acquire valuable communication skills and operational knowledge as a result of the collaboration. Significantly, teams highlighted where strengths and weaknesses lay, how things could get done and, most important of all, how procedures could be improved. Taken together, the teams began to be the eyes and ears of the ally organisations, embodying a new form of corporate intelligence that cut across departmental boundaries. Interestingly, much of this learning was tacit.

One area of learning during the third stage was that customers began to recognise that their behaviour could, and did, have an effect on suppliers' service. The importance of process understanding was constantly being reinforced and horizons were extended beyond immediate dyad relations by throwing light on which chain activities were responsible for either good or bad performance.

The biggest disappointment at this stage in the IDV/ Killeen alliance, was lack of feedback from the steering group and this had a de-motivating effect on team performance. Individuals, working within the alliance as well as attending to their regular jobs, felt that this considerable effort seemed not to be being recognised. It proved to be very difficult to



keep up such an intense momentum and development was interrupted by periods of erratic progress. Motivation lapsed, people failed to turn up for meetings and information seemed to be flowing one way. All the wrong signals were being sent out (refer to chapter 4.2.1, page 137).

With regards to the SCA inter-organisational improvement teams were set up with the remit to identify cost saving and process improvement opportunities in the alliance operations and there was a great deal of enthusiasm to pursue these goals (refer to chapter 5.3.1, page 195).

In much the same way the Sun / Birkbys alliance was similarly successful in the initial stages when objectives motivating the alliance began to be realised. Sun no longer had to search for suppliers with technical and commercial expertise, or to get involved in seeking competitive tenders. This had been the strategic intent of the alliance in 1991 and it gave Birkbys the time and opportunity to significantly broaden its customer base by offering higher value products. The alliance positively impacted on Birkbys profitability. Eventually, Birkbys became the sole UK supplier of enclosures to Sun, Linlithgow and was soon also doing business with Sun in the United States (refer to chapter 6.3.1, page 240).

In all of the alliances disclosing sensitive information proved to be painful and in all cases costs were difficult to ascertain. Once business accounts were on the table the unknown factor was removed. No one argued with the principle that parties have to make a reasonable profit and the ideal situation was when companies felt in balance and that all were winning.

Table 7.6 summarises common themes in this stage.



Compelling Purpose	
Indicators	Contra indicators
<ul style="list-style-type: none"> <li>• Champions maintain commitment</li> <li>• Strategic and operational knowledge transfer across boundaries</li> <li>• Partners objectives being achieved</li> <li>• Results manifest in cost savings</li> <li>• Inter-organisational teams promote communication</li> <li>• Suppliers following strategic direction of the customer</li> <li>• Cost openness by degrees</li> </ul>	<ul style="list-style-type: none"> <li>• Objectives not clearly articulated</li> <li>• Objectives achieved and not renewed, teams lose focus</li> <li>• Lack of feedback from senior management</li> <li>• Margins being eroded , cost drivers not being addressed</li> <li>• “Old style” customer behaviour</li> <li>• Start off too quickly</li> <li>• Innovation overload</li> </ul>

**Table 7.6: Compelling Purpose: Common Factors**

*P2.1 Participants are motivated only when the plan has been collaboratively designed and business objectives are aligned.*

**7.3.2 Conflict management**

The alliances in general suffered from varying levels of dissent. However conflict management was rational in the sense that when controversial issues did surface these were resolved, most often immediately, through discussion and corrective action.

Due to lack of time and as a result of limited resources, the teams had to get things done as quickly as possible and anxiety to get results tended to overcome intransigence. Also, the very fact of their intellectual ability and ranking in the respective organisations, meant that team members were also effective problem solvers and decision-makers.

Although the alliances did not have explicit conflict management structures, difficult issues were resolved by discussion in practically every case. Because of trust and commitment, resolution often took the form of innovative solutions, rather than deadlock resulting in winners and losers (refer to chapter 5.3.2, page 196).



***P2.2 Conflict is mostly due to misunderstanding and misperceptions and may be resolved through dialogue and corrective action.***

### **7.3.3 Interdependence**

In all three cases, interdependence was the essential condition, when opportunities were revealed that would not have been apparent if the companies had remained completely free. In an environment of greater certainty, the organisations, were able to more accurately assimilate and process information and make informed decisions.

IDV and Killeen had always seemed to acknowledge their interdependence, even prior to the alliance. They had been working together for over two decades, so much so that IDV described Killeen as being “attached with an umbilical cord”. IDV had had difficulty sourcing a supplier of Killeen’s calibre, however over the years this situation changed. Continual benchmarking together with increasing knowledge of Killeen’s costs and the anomalies of the paper market, enabled IDV to identify alternative suppliers. In the long-term, this may yet spell the end of the alliance between the companies. In this case, greater knowledge may ultimately make the partners less interdependent (refer to 4.2.2, page 138).

Sun’s supplier development strategy was also intended to increase the mutual reliance between the organisations and the die was cast when Birkbys began to follow Sun’s strategic direction by re-aligning its processes. Dependence increased when Birkbys invested in a new plant in Scotland, located near to Sun, but reduced when the Scottish orders stopped (refer to 6.3.2, page 241).

In the third alliance, Shell Expro’s outsourcing strategy also involved considerable teamwork between the client and contractors. This was to have been controlled by milestones in the contract, to signal when the contractors scope should be extended to take on more responsibility. In reality, this was not as straightforward as the contract intended, nevertheless there was incontrovertible evidence that the contractor and the client were both developing new capabilities along these lines (refer to 5.3.3, page 197).



*P2.3 As alliances evolve, the degree of interdependence adjusts to suit changing circumstances as the partners learn how to manage the relationship.*

#### **7.3.4 Learning and Alliance Skills**

A lot of pressure to produce results came from the steering groups in the IDV/Killeen and SCA and the teams not only had to be cohesive as regards tactics but also decisive and commercially aware. Sun and Birkbys eventually recognised the necessity for a steering committee to structure and order the change process. Communication skills involved presentations to a wide cross section of people and all in all the *Stage II* was a time of intense learning with little time for reflection (refer to chapter 4.2.3, page 139; 5.3.4, page 198; 6.3.3, page 242).

In each case teams proved to be adept at research outwith their own organisations. Significantly however, internal boundary spanning tended to be limited.

In terms of learning, IDV was beginning to thoroughly understand the corrugated industry and by this time knew a great deal more about making the outer case than it had at the outset. This was to stand IDV in good stead in future negotiations and, for its part, Killeen capacity and efficiencies (driven by the alliance) had improved to such an extent that it was forced to introduce a programme of cost review and strict control just to keep on top of all the changes. The purpose was to differentiate costs amongst different customers and spread them proportionately, rather than working with averages, as they had in the past.

Cooperation helped the firms learn from each other and this accelerated knowledge acquisition. Although, difficult to transfer, nevertheless, the alliances encouraged effective use of specific knowledge to develop joint processes, procedures and techniques.

The following areas of learning and skill development, summarised in table 7.7, applied in varying degrees to people in all three alliances: -



Learning and alliance skills	
Enablers	Inhibitors
<ul style="list-style-type: none"> <li>• Alliance management skills, e.g. Persuading negotiating and developing</li> <li>• Logistics process improved</li> <li>• Sharing of forecasting and planning information</li> <li>• Evidence of improvement, quick wins</li> <li>• Wider technical knowledge</li> <li>• Increased capacity and efficiency</li> <li>• Trust and commitment</li> <li>• Network learning</li> <li>• Teamwork</li> <li>• Understanding of industry environment</li> <li>• Process orientation rather than functional</li> <li>• Cost information available</li> </ul>	<ul style="list-style-type: none"> <li>• Fluctuating commitment and confidence</li> <li>• Lack of equity between risk and rewards</li> <li>• Need for common procedures</li> <li>• Need for discipline in terms of cost and time</li> <li>• Limited formal structure</li> <li>• Performance targets too easily achieved</li> <li>• Divergent values</li> <li>• Different perceptions of power relationships</li> <li>• No properly defined strategy</li> <li>• Lack of openness</li> <li>• Lack of trust</li> <li>• Inadequate communication</li> <li>• Inconsistent behaviour</li> <li>• Failure to empower partners</li> </ul>

Table 7.7: Summary of Learning and Alliance Skills

**P2.4**    *Learning is at the heart of alliance management and knowledge is the basis of alliance strength.*

**7.3.5    Joint Decision-Making**

Sharing information was essential to the entire alliance process and joint decisions and problem solving was a direct outcome of this new openness. Customers and suppliers worked together early in the design stage of new products and analysed the process that interfaced between the organisations. In so doing, they removed waste from the systems and developed new capabilities in terms of teamwork skills and heightened technical and commercial awareness.

All the alliances introduced some form of co-location or transfer of personnel. This applied for instance, in the IDV daily operations meeting at which a representative of Killeen was in attendance. In terms of operations, this has been a great success since the meetings began. In Sun the introduction of the resident planner was of major benefit as was the case



in the Aberdeen SCA. The fact that all three partners were represented in the Torry base offices proved to be very significant.

Sharing forecasting and scheduling information was critical to the entire process. The allies were sharing more and more market information, giving them a better insight into future trends.

Misinterpretations and misunderstandings were a problem, especially when dealing with technical matters and even when everyone thought that he had got the point. Messages and intentions easily became distorted as information was passed on, especially by persons not involved in technical details. This kind of problem was resolved when people directly involved in projects got together to agree tactical issues (refer to chapters 4.2.4, page 143; 5.3.5, page 198; 6.3.4, page 244).

Effective decisions depended upon teams cooperating and on inter-organisational team members' ability to draw upon a larger social and knowledge network. Alliance success was heavily dependent on building social relationships and these encouraged breaking down barriers to communication. Table 7.8 summarises factors affecting joint-decision making.

Factors Influencing Joint Decision Making	
Indicators	Contra-indicators
<ul style="list-style-type: none"><li>• Communication and information sharing</li><li>• Increased technical and commercial awareness</li><li>• Transfer of personnel</li><li>• Inter-organisational team projects</li><li>• Improved market knowledge</li><li>• Problem solving</li><li>• Champion or key contacts to disseminate information</li><li>• Increased confidence in supplier performance</li></ul>	<ul style="list-style-type: none"><li>• Lack of trust and openness</li><li>• Misinterpretations and misunderstood communication</li><li>• Limited technical knowledge</li></ul>

Table 7.8: Summary of Factors Influencing Joint Decision Making



***P2.5 Alliances encourage joint decisions via an extensive formal and informal system of networks.***

### **7.3.6 Personal Satisfaction and Motivation**

So far the alliances had fostered better understanding of the organisations and during stage III learning was mostly as a result of doing. Quick successes were exhilarating for team members and people were beginning to think and behave differently, especially when the frenetic pace slackened and day jobs again became easier to manage.

Instead of only looking at their own work, people's perspective had changed and this was manifested in a new cooperative outlook. In each alliance, participants saw their day to day jobs becoming easier due to team effort and more frequent communication. However, although overall the alliance was making jobs more interesting, people's enthusiasm was sometimes dampened because of the intense effort and time required, over and above their day jobs.

The social aspect of team working involved interaction between people normally engaged in distinctly different activities. Increased knowledge provided the capability for generation of novel solutions, while the social dimension of teamwork encouraged dissemination (refer to chapters 4.2.5, page 144; 5.3.6, page 200; 6.3.5, page 248).

***P2.6 Teamwork is important to personal satisfaction and in most cases the scope of people's jobs increased, became more interesting, potentially creative and fun to do.***

Figure 7.5 below summarises the themes in *Stage II*.



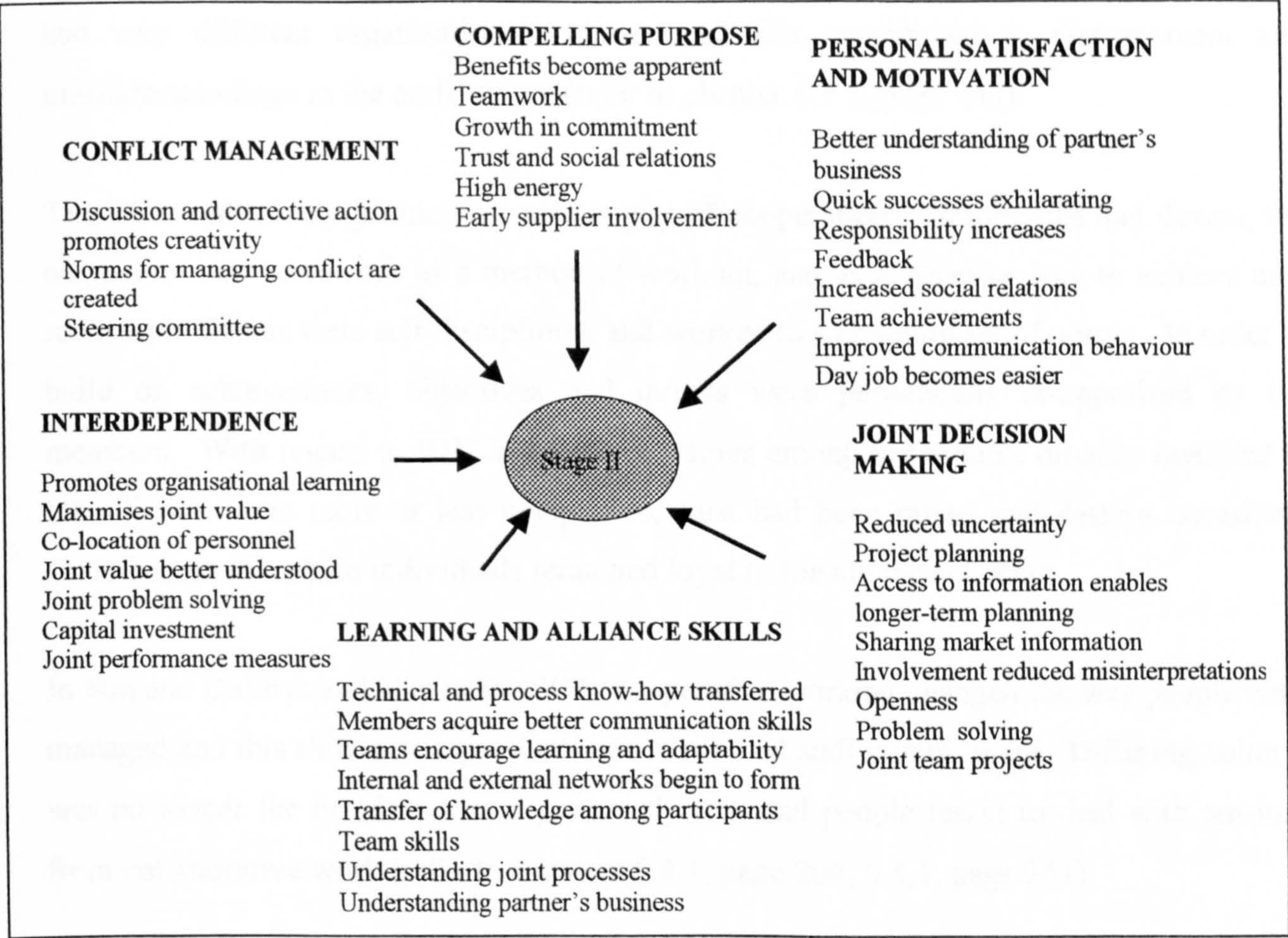


Figure 7.5: Thematic Grouping in Stage II

#### 7.4 STAGE III

Characteristic features in the *Stage III* are listed alphabetically as follows: -

- Adapting cultures
- HR assessment
- Performance plateau
- Process and cost understanding
- Reflection and learning

##### 7.4.1 Adapting Cultures

Without exception, none of the companies involved in the three alliances that are the subject of this study had any previous appreciation of the relevance of business culture, or



how it might influence alliance development. Apart from IDV and Killeen, each company had very different organisational cultures and this contributed to disagreement and misunderstandings in the early stages (refer to chapter 4.3.1, page 147).

The allies intensively promoted a philosophy of cooperation. Despite ups and downs, the companies saw teamwork as a method of working, and as a superior way to achieve cost reduction. Teams were self-disciplining and worked to a common set of norms. In order to build on achievements, objectives and targets were periodically re-appraised by the members. With regard to IDV and Killeen, values among individuals directly involved in the alliance, were more or less compatible, trust had been raised and despite occasional anxieties, on the whole individuals remained loyal to the alliance concept.

In Sun and Birkbys and also in the SCA, cooperative working changed the way people were managed and this shift in company attitude reinforced staff commitment. Differing cultures was no longer the problem that it previously was and people learnt to deal with tensions from collaborative work (refer to chapters 5.4.1, page 204; 6.4.1, page 251).

Power was always an issue between customer and supplier and powerful customers invariably maintained dominance, which was a factor that influenced the supplier's business culture. One positive aspect was that association with a strong customer could boost the supplier's influence within his own industrial environment. Table 7.9 summarises relevant factors.

Factors Promoting Cultural Alignment
<ul style="list-style-type: none"><li>• Inter-organisational teamwork</li><li>• Open communication channels</li><li>• Trust and commitment</li><li>• Changing attitudes and working philosophy</li><li>• Common values</li></ul>

Table 7.9: Summary of Factors Promoting Cultural Alignment



*P3.1 Developing an alliance culture involves changing individual and organisational mindset to embrace a cooperative philosophy.*

**7.4.2 HR Assessment**

HR policy and alliance objectives overlapped in the sense that continuous learning and training was as important for an individual’s future as it was for the alliance companies. The question was how to best develop skills and capabilities appropriate to changing needs, maintain people’s motivation and at the same time nurture innovative and creative ability. In all cases people’s jobs increased in scope and responsibility although formal Human Resource policies remained unaffected by alliancing. In some instances, for example in IDV and Sun Microsystems, individual performance appraisal incorporated teamworking, but on the most part reward and career development were not directly influenced by the alliances (refer to chapters 4.3.2, page 147; 6.4.2, page 253).

The SCA attempted to impact on the wider organisations by incorporating an HR policy in the alliance strategy document and in this way tried to cascade the principles to the workforce (refer to chapter 5.4.2, page 205). Alliance related HR Policy should cover such aspects of recruitment, induction, coaching, performance measures, appraisal, training and career development. See table 7.10.

HR Policy Promoting Alliance Skills	
Objectives	Implementation
<ul style="list-style-type: none"><li>• To link strategy with tactics</li><li>• To develop a common purpose</li><li>• To prepare employees for change</li><li>• To motivate people and nurture innovative and creative ability</li><li>• To convince the workforce that continuous learning is important to the alliance future</li><li>• To develop skills and capabilities appropriate for the alliance</li></ul>	<ul style="list-style-type: none"><li>• Use performance evaluation and rewards to promote motivation and team membership</li><li>• Rotate team members and leaders</li><li>• Shift team goals to match changing circumstances</li><li>• Team goals and objectives should reflect continuous performance improvement</li><li>• Take corrective action based on performance results</li><li>• Look out for project duplication in the teams</li></ul>

**Table 7.10: Summary of HR Policy to Promote Alliance Skills**



*P3.2 Although reward and career structures promote new skills and encourage individuals to learn, HR policies remained unaffected by the alliance.*

**7.4.3 Performance Plateau**

There came a point in each alliance when momentum slowed and business became part of the day to day routine. The prevailing opinion was that all had reached a sustainable performance at an operational level (refer to chapters 4.3.3, page 147; 5.4.3, page 206; 6.4.3, page 254).

People almost welcomed the loss of momentum. There were so many other areas of business to concentrate on that the alliance was pushed to one side. The significance of *Stage III* was that the single economic objective in the *Stage I* had the potential of being expanded into a multiplicity of new projects.

The alliances were evolving under the impact of external and internal forces. Table 7.11 synthesises factors contributing to the plateau.

Factors Contributing to the Alliance Plateau
<ul style="list-style-type: none"><li>• Objectives achieved and new objectives not yet identified</li><li>• Individual energy diminished</li><li>• Too many projects</li><li>• Mistrust and interpersonal conflict</li><li>• Loss of focus on alliance</li><li>• Conflicting priorities</li><li>• Influence of corporate policies</li><li>• Supplier costs not clear</li><li>• Insufficient formal authority and empowerment</li></ul>

**Table 7.11: Synthesis of Factors Contributing to the Alliance Plateau**

*P3.3 The plateau stage is a time when the alliance loses momentum and it is necessary to review past achievements, consolidate remaining projects and look to the future.*



#### **7.4.4 Process and Cost Understanding**

In all cases, as the alliances matured, the participants became knowledgeable about the processes that interfaced between the organisations. Communication of forecasting and planning information had an immediate and positive effect. Knowledge and understanding as regards business operations had been heightened because of the common base created by collaboration (refer to chapters 4.3.4, page 150; 5.4.4, page 208; 6.4.4, page 255).

The alliances have required people to coordinate their work. Between IDV and Killeen and Sun and Birkbys, tasks and responsibilities for developing new products were shared and this reliance on others intensified as the relationship developed. Birkbys and Killeen offered expertise during the preliminary design work, whereas previously they would have been presented with a design and simply asked to model the tools, mould a sample enclosure or prepare a new box prototype for testing.

A main concern was capturing and implementing innovation because there were just too many simultaneous projects. IDV set up an innovation team to evaluate new ideas and consolidate the remaining projects. However, the team struggled to prove its worth and it was debatable whether or not the ideas it came up with could be considered genuinely innovative. In an atmosphere of declining interest, the eventual outcome was that not a great deal happened.

In all cases, alliance teams had great difficulty in identifying costs, although improved cost understanding reinforced personal relations and the glue that held the alliances together was expectation of trust and openness.

***P3.4 By this stage alliance partners are more knowledgeable about processes that form the interface between the organisation with performance improvement embedded in the day-to-day routines.***



#### 7.4.5 Reflection and Learning

By the time *Stage III* was reached, there was a lot of cross-fertilisation of operational knowledge and the companies better understood the partner's business processes and needs. In particular, people were much more customer focused (refer to chapters 4.3.5, page 151; 5.4.5, page 210; 6.4.5, page 257).

Other learning was mainly in terms of development of individual skill and competence, team skills and increased technical and commercial know-how. As the alliances matured, the companies absorbed embedded knowledge and combined skills to create new capabilities.

As well as developing close personal contacts, the companies created a series of joint institutions to manage the relationships which began to formalise rules and procedures concerning collaboration.

All parties recognised the need to learn from past achievements and to consolidate existing projects. IDV / Killeen meetings took place to review and clarify the term innovation and how to manage the process for capturing new ideas. This demanded a more structured approach to project evaluation and it also became evident that much learning from the collaborative work had been lost. This was not simply because of inadequate recording but was frequently due to failure to disseminate or feedback.

The suppliers had benefited greatly from association with substantial customers, had become more capable and consequently had been able to improve performance. Overall alliance skills had developed and this cannot be under estimated as the partners had taken advantage of the new knowledge in their dealing with other companies. In general terms, the alliances had helped to increase partners' capacity to win new business and become far more competitive.



By the end of this stage, each participant was under pressure to prove the monetary value of the alliance to corporate stakeholders. Although the companies were still struggling to evaluate cost reduction, the biggest challenge was how to quantify the total service in financial terms, including intangible aspects of the service, not just the cost issue in isolation. Alliance learning encouraged industry and market awareness in the partners and promoted agility and speed of response. In other words, learning enabled managers to recognise the need for change and manage that change proactively. In this way, learning generated innovation in products, processes and services and promoted organisational growth. Table 7.12 summarises these factors.

Factors Influencing Alliance Learning
<ul style="list-style-type: none"><li>• Cross-fertilisation of technical and operational knowledge</li><li>• Understanding of partner’s business processes and needs</li><li>• Increased customer focus</li><li>• Team skills and increased technical and commercial know-how</li><li>• Importance of reflection to review and consolidate achievements</li><li>• Formal procedures to support the alliance</li><li>• Personal networks improve communication channels</li><li>• Improved cost understanding</li></ul>

Table 7.12: Summary of Alliance Learning

**P3.5** *Alliances are permanently precarious and alliance learning enhances flexibility in taking strategic decisions. Companies have to re-consider the effectiveness of their present strategy.*



Figure 7.6 summarises the main characteristics in *Stage III*.

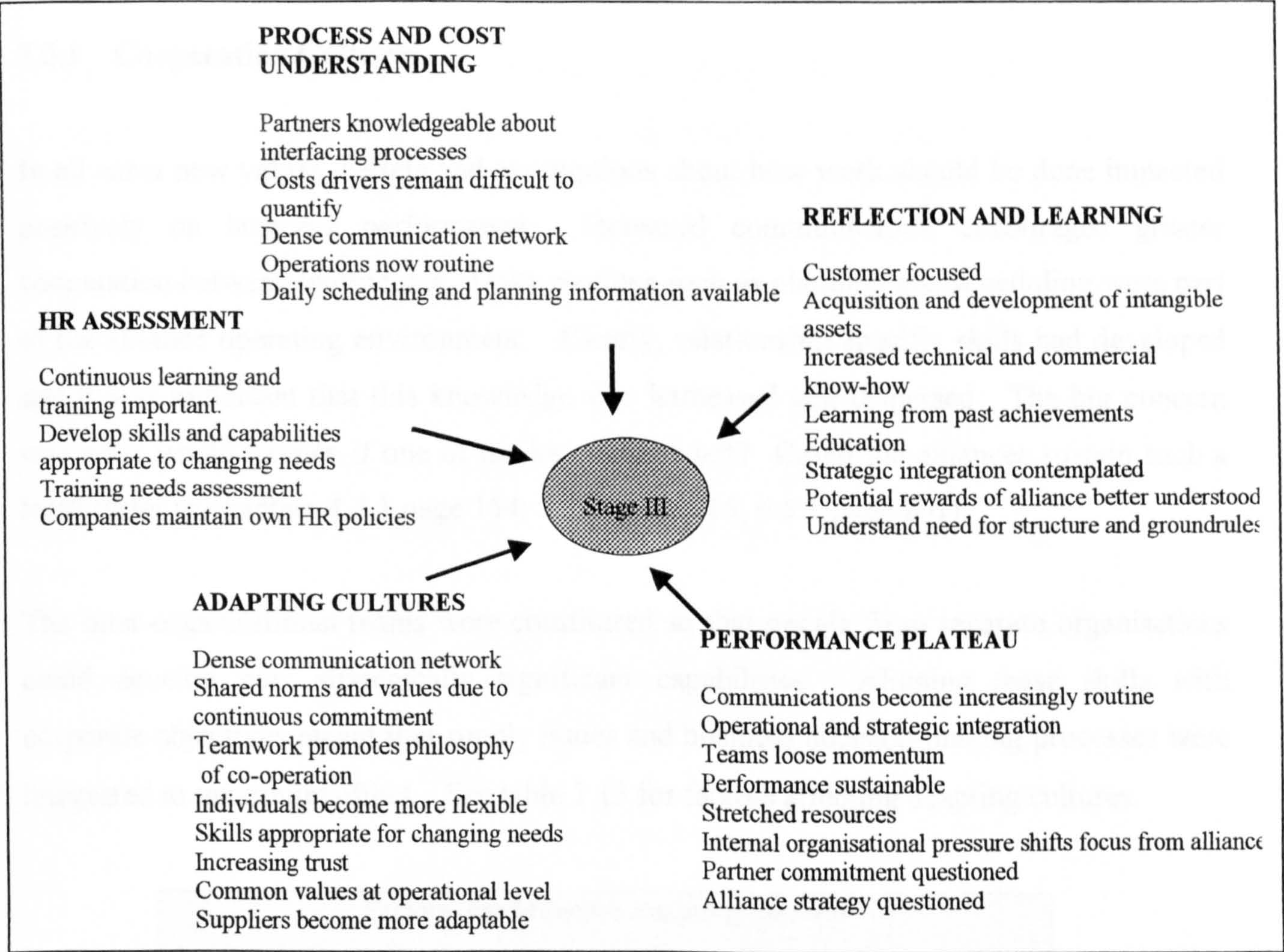


Figure 7.6 . Thematic Grouping in Stage III

7.5 STAGE IV

The following characteristics, illustrated in figure 7.7, on page 323, are featured in the *Stage IV*: -

- Cooperating cultures
- Development of alliance skills
- Joint innovation and continuous improvement
- Joint tacit and explicit learning
- Process alignment at interface



- Strategic review

7.5.1 Cooperating Cultures

In all cases new values, beliefs and assumptions about how work should be done impacted positively on business performance. Increased communication encouraged greater cooperation between individuals. Daily routines such as planning and scheduling were part of the alliance operating environment. Clearly, relationship specific skills had developed and it was important that this knowledge was harnessed and dispersed. The big concern was what would happen if one of the key players left? Could the alliances sustain such a loss? (refer to chapters 4.4.1,page 154; 5.5.1, page 215; 6.5.1,page 261).

The inter-organisational teams were constituted so that people from separate organisations could develop new strategically significant capabilities. Aligning these skills with corporate objectives meant that supply issues and business decision-making processes were integrated to maximum effect. See table 7.13 for factors affecting adapting cultures.

Factors that Influence Adapting Cultures	
Help	Hinder
<ul style="list-style-type: none"><li>• Management commitment</li><li>• Going the extra mile</li><li>• Support from the board</li><li>• Explicit in corporate strategy</li><li>• Trust</li><li>• Alliance success</li><li>• Communication networks</li><li>• Teamwork ethos</li><li>• Education and training</li><li>• Managing the change</li></ul>	<ul style="list-style-type: none"><li>• Lack of visible commitment from board and managers</li><li>• Corporate ethos inclined towards competitive bidding</li><li>• Vision not supported by appropriate behaviour</li></ul>

Table 7.13: Summary of Factors that Influence Adapting Cultures

*P4.1 As alliances evolve, individual and organisational values become more compatible within the alliance domain.*



7.5.2 Development of Alliance Skills

Cooperative skills learnt by all alliances over the past few years (1991-2000) became increasingly important and the ability to think creatively and develop solutions continued to benefit the allies. Each company experienced considerable learning that was also used to good effect with other customers and suppliers. In essence therefore alliancing changed the way they work together (refer to chapters 4.4.2,page 156; 5.5.2,page 215; 6.5.2, page 261).

Intangible resources were classified as assets or competencies and included not only intellectual property rights or brand names, but also skills or competencies absorbed by employees, customers and suppliers. Table 7.14 summarises such knowledge.

Alliance Skills
<ul style="list-style-type: none"><li>• <b>Technical</b> process knowledge specific technical knowledge</li><li>• <b>Commercial</b> understand costs performance measures business knowledge</li><li>• <b>Management</b> inter-personal team working proactive decision making problem solving strategic focus leadership and planning visionary and adaptive change oriented intellectual independence exploit opportunity</li></ul>

Table 7.14: Summary of Alliance Skills

*P4.2 Inter-organisational teamwork encourages learning at many levels and functions in business and the increasing skills base develops relationship specific know-how in both the customer and supplier organisations.*



7.5.3 Joint Innovation and Continuous Improvement

High performance stemmed from bringing together people with the right mix of intellectual skills to address complicated problems. Cross-functional teamwork was a means by which skills within separate organisations combined to develop new strategically significant capabilities (refer to chapters 4.4.3,page 157; 5.5.3,page 216).

As this was difficult to transfer and costly for rivals to copy, ally businesses became jointly more efficient by facilitating continuous transfer of knowledge and new joint capabilities. Likewise, learning was promoted as customer and personnel in both companies better understood each other’s processes. Thus, on going innovation and continuous improvement became embedded in the alliance philosophy.

The growth of innovation was in most cases an incremental development of processes and people’s expertise, rather than dramatic breakthroughs. However, the speed of change meant that much of the innovation was not captured. The lesson to be learnt was that it required active management support to evaluate ideas and to decide between those that were commercially viable and others that were not. When it turned out that a project which at first glance looked as if it was going to result in creating a significant saving, did not, such learning was not wasted and the information was able to be resurrected when the timing was right. See table 7.15.

Joint Innovation
<ul style="list-style-type: none"><li>• Harness and unify separate strengths</li><li>• Pool resources</li><li>• Inter-organisations teams drive innovation</li><li>• Innovation needs active management support</li><li>• Streamline process and remove waste</li><li>• Extend supply chain network</li><li>• Promote continuous improvement and competitive advantage</li><li>• Innovation and learning are bound together</li></ul>

Table 7.15: Summary of Joint Innovation



***P4.3 Harnessing and unifying collective strengths is recognised as the most important means of seeking innovation and maintaining competitive edge.***

#### **7.5.4 Joint Tacit and Explicit Learning**

Individual knowledge and skill positively contributed to achievement of collective objectives through people's utilisation of all available resources. The critical factor was the knowledge and understanding gained from closer working relations and much improved communication between the companies. The new way of working directly impacted on jobs and attitudes and contributed to the organisations doing business better. Sharing ideas and openness reduced fear of failure and people realised that knowledge could be gained, even from mistakes (refer to chapters 4.4.4, page 160; 5.5.4, page 217; 6.5.2, page 261).

Joint learning which was not fully exploited has been one of the big failings so far. This was mainly due to poor documentation as well as managers not really understanding the implications of knowledge generation and retention, consequently much of the joint learning in the alliances was tacit and therefore its diffusion was limited. In all three instances, relationship specific competencies have been acquired.

***P4.4 Alliance learning develops relationship specific competencies.***

#### **7.5.5 Process Alignment at Interface**

All parties acknowledge, to a lesser or greater extent, that the improvements from the past work were now embedded in day to day activities. To most people, efficient practices appear to have happened automatically and this may have contributed to the general loss of interest and momentum in the change process (refer to 4.4.5, page 160; 5.5.5, page 218; 6.5.3, page 262).

***P4.5 Processes at the interface between the partners eventually become routine. Process alignment continues to improve as the alliance matures only when motivation remains.***



### 7.5.6 Strategic Review

With regard to the IDV / Killeen alliance, two factors had a devastating effect on the alliance. Firstly Grand Metropolitan and Guinness merged to form the Diageo group. International Distillers and Vintners (IDV) then became known as United Distillers and Vintners (UDV) and Killeen's managing director left (refer to chapter 4.4.7, page 162).

The Aberdeen SCA alliance environment had changed since the outset due to the dramatic fall in the price of oil in 1998 bringing about the need to become leaner and more competitive. UESL had been forced to re-define its entire strategy. The management structure of Shell Logistics changed from being a series of functional departments to being horizontally oriented (refer to chapter 5.5.6, page 218).

Sun's entire world-wide organisation had undergone two internal changes since 1997. The Sun operation became less functionally orientated and worked using cross-functional product groups. Within three years Sun intended to re-organise its entire supply chain, rather than just its supply base and this would mean fewer points of contact between Sun and its suppliers (refer to chapter 6.5.4, page 263).

Throughout the history of these alliances, the customer has always been dominant. The time had come for the companies to discuss the joint future and to decide the path they wish to take including broader issues of responsibility, dominance and control.

***P4.6 Strategic reviews held at regular intervals consolidate current and past activities and identify new alliance objectives. In so doing, the alliance utilises knowledge gained to further develop and invest in innovative methods of delivery, production and joint core processes.***

Strategic reviews were undertaken periodically, however, by this fourth stage, many of the initial objectives had been achieved. For example in all the studies costs had been reduced, productivity improved and planning and scheduling information was freely available.



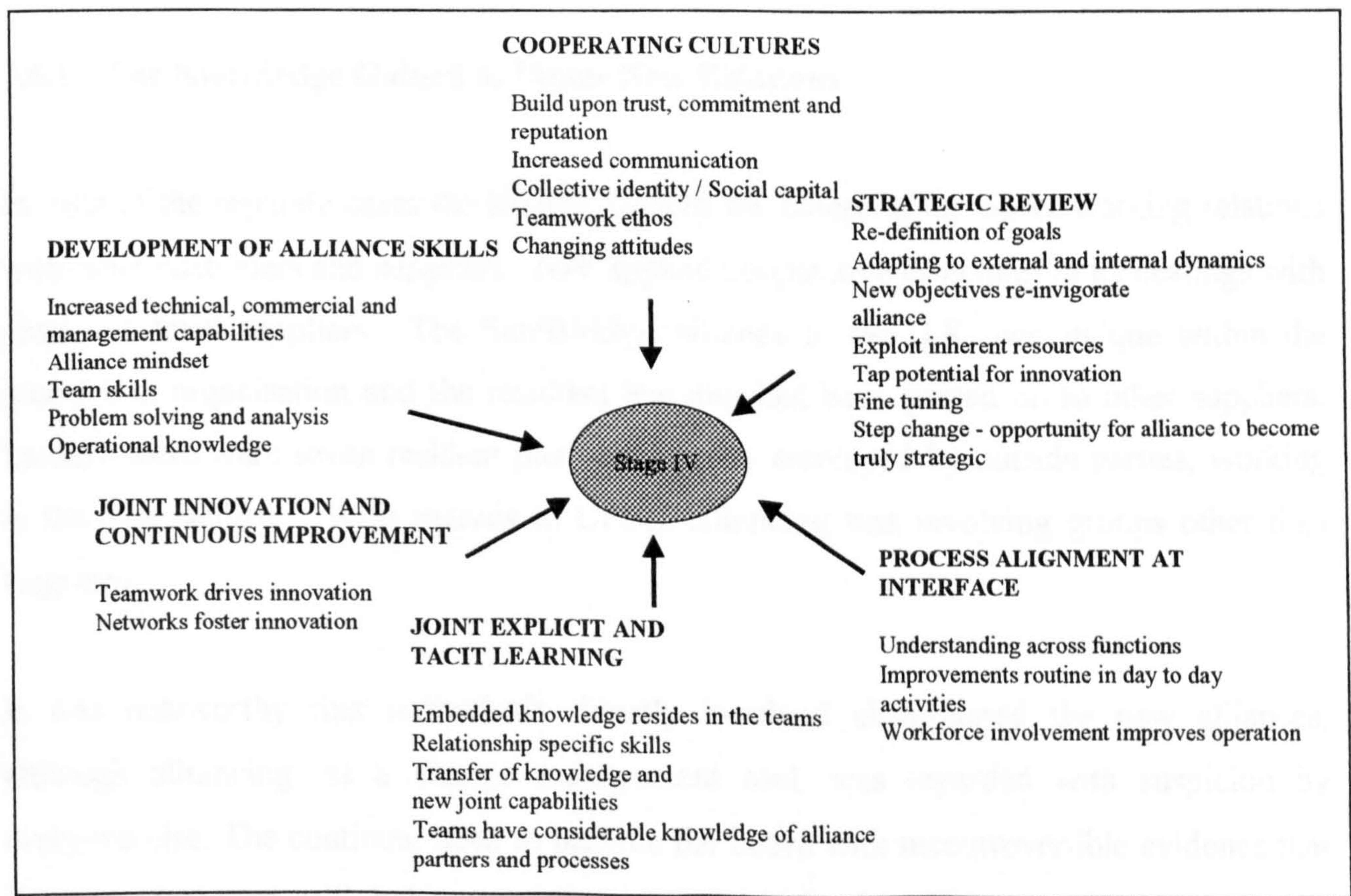
Organisational culture had been modified to a lesser or greater extent, reflecting varying degrees of collaboration.

Results were what counted and in the fourth stage of the alliance, costs became even more important. Costs had been reduced to a sustainable level and the alliances could make use of new knowledge acquired to further develop and invest in innovative methods of delivery, production and joint core processes.

**P4.7** *Alliances change and evolve all the time. It is essential to continually assess external and internal environments in order to appreciate the strategic position of the alliance.*

**P4.8** *The alliance re-adjusts to suit contingent circumstances; the assumption being that relations will continue in the light of strategic re-definition.*

Figure 7.7 describes the main characteristics in *Stage IV*.



**Figure 7.7: Thematic Grouping in Stage IV**



## 7.6 STAGE V

Having achieved most of the objectives and following a strategic review, the allies came to the realisation that they were at a crossroads. They faced the choice to either, maintain the current level of expenditure of resources in the cooperative process or, to dissolve the alliance and terminate the contacts hitherto established. Also, in each of the cases they could use the experience gained to found new alliances. It should be noted that the freedom to withdraw was implicit at all stages and it did not follow that decision to part could only be made in *Stage V*.

The management option's were to: -

- Withdraw
- Use knowledge gained to foster new relations

The research question relevant to this section is “*what happened when alliances ended?*”

### 7.6.1 Use Knowledge Gained to Foster New Relations

In each of the separate cases the alliance created the blueprint for closer working relations with other customers and suppliers. IDV applied cooperative principles in its dealings with glass and label suppliers. The Sun/Birkbys alliance in the U.K. was unique within the global Sun organisation and the resultant learning had been passed on to other suppliers. Latterly there were seven resident planners directly employed by outside parties, working in the Sun facility. With regards to UESL, alliancing was involving groups other than Logistics.

It was noteworthy that individuals directly involved championed the new alliances, although alliancing, as a change management tool, was regarded with suspicion by everyone else. The continual need to provide the board with incontrovertible evidence that the best deal was still being promoted did not help the efforts aimed at continuous improvement and removal of waste.



***P5.1 Knowledge is used to develop new alliances and support a portfolio of relations.***

**7.6.2 Withdraw**

The cases under study demonstrated that withdrawal and recovery were not exclusive options. The declining pace of activity in all three alliances set counter forces in motion. The presence of trust made exit less likely by providing a greater chance of recovery. Trust prevented deterioration from becoming irreversible and created the expectation that negotiations could resolve concerns.

Each alliance had its strategic goals, some more explicit than others, and in order to achieve these targets the alliance had to be maintained, provided the cost was acceptable. In each case, a series of crises threw up the need for subtle management and usually it was the first of these events that had the most severe impact. A crisis generated conditions that encouraged the alliance partners to review the current status and to question what was causing instability.

A crisis of confidence was manifest in the very early stages of both the SCA and the Sun and Birkbys alliance. The SCA attempted too much too soon and this had an adverse effect on customer service. Similarly, although Birkbys' work was subject to a high standard, quality control, was not rigorous enough for Sun. The exception appeared to be the IDV/ Killeen alliance which ran smoothly in the early days, possibly because of the explicit objectives and programme of planned objectives written into the agreement.

During turbulent times, the alliance partners' role became one of problem solving and through joint discussion the issues were generally resolved.

The Sun / Birkbys alliance had not been confirmed in any formal agreement or written ground rules and the strategy that developed was reactive in response to emergent issues, rather than the product of advanced planning. This strained the alliance as the supplier was



taking on more and more Sun work, thereby becoming increasingly dependent on Sun the one customer.

The Shell alliance was very turbulent throughout its entire existence and this was due to the complexity of the three party alliance. Despite frequent personal clashes, the participants worked hard to improve the logistics process and reduce costs. Open dialogue and commitment to the alliance prevented the SCA from reverting back to traditional contractor / client relations.

***P5.2 The very act of considering to withdraw can lead to corrective action and consequent revitalisation of the collaboration.***

## **7.7 TRANSITION BETWEEN STAGES**

The purpose of this research was to investigate the possibility of a staged development in alliances as they matured. The foregoing has described the findings of three case studies which demonstrate how the alliances moved through particular phases. Dominant characteristics in each stage and the transition between stages have been documented within each case.

The following summarises the conditions during transition in each alliance. The research question pertinent to this section is, ***“did particular events signal the relationship change to another phase?”***

The transition from *Stage 0* to *Stage I* in all three alliances is signalled by the end of information gathering and analysis. Partners had been selected and a formal, or informal alliance agreement successfully negotiated. The allies moved to implement the alliance in *Stage I*.



## **Transition Between Stages - IDV/ Killeen**

With regard to IDV and Killeen, the explicit objectives set out during *Stage 0* meant that the dedicated teams, established in *Stage I*, were able to effectively plan how they were going to manage and resource each project. The passage to *Stage II* was smooth and saw the project teams working at full capacity (see table 4.2, page 136).

The initial objectives were accomplished much sooner than anticipated and a lull in activity followed. Project teams running out of steam, indicated the transition from *Stage II* to *Stage III* (see table 4.5, page 169). New strategic objectives were as yet unclear and the teams needed direction to meet the new and changing internal and external environment. The transition to *Stage IV* was characterised by a structured review of current projects and a process planning exercise to identify a new agenda for change (see chapter 4.4, page 153).

## **Transition Between Stages – SCA**

With regards to the SCA, life was more complex. Although the alliance agreement was the most formally established of all the three cases and laid out contractual expectations in detail, there was no reference to ground rules, communication mechanisms and operational procedures.

The contract specifically set out performance milestones which when achieved, were to release more control to the contractors. In this early part of *Stage I* there were times when UESL seriously considered if it was doing the right thing by being in an alliance and felt that things would improve if they had greater control. To address the looming impasse, UESL therefore reviewed what was happening in the alliance and drew up a “Pause Plan”. Recommendations from the latter, were then shared with SML and ARRC, and this had the effect of concentrating efforts aimed at improving the situation. The transition to *Stage II* was also characterised by changes in attitudes and behaviour on the part of the partners, with increased communication and a greater degree of openness (see table 5.4, page 193).



Initial problems with regards to fundamental operating procedures between the UESL, SML and ARRC had never been properly addressed. Team members' motivation was difficult to sustain because objectives had not been clearly articulated. On the most part, people expected things to change quickly and they attempted too much too soon. In reality, enthusiasm was not enough and the *Stage III* was characterised by loss of energy and failed targets (see table 5.6, page 203).

Attempts to confront these problems heralded the transition to *Stage IV* (see table 5.8, page 214). In the first instance, the main contract had at last been signed by the Halliburton group, which meant that there was a substantial degree of commitment from SML's parent company. Also, within the SCA itself, procedures to monitor team projects had been established, as well a monthly management report. This, in itself, was a significant step forward as the statistics for the report was drawn from SML and, up until this time, it had been very difficult to gain access to SML's database or make sense of the fragments of information released. The whole operation was assisted by the assignment of a Shell contracts manager to the SML site. Once again the alliance seemed to have moved on and new objectives would mean a return to *Stage I*.

### **Transition Between Stages – Sun/ Birkbys**

The crisis of confidence in this alliance was mainly due to Sun questioning Birkbys quality of performance. Birkbys had no notion of just how much it would have to change in order to meet Sun's demands. Also, Sun did not appreciate the amount of development Birkbys would require to achieve the standards. Strained relations was the prevailing condition, although this soon changed when Sun engineers began to support Birkbys. Communications improved and Sun's confidence in Birkbys improved. These circumstances marked the progression from *Stage I* to *Stage II* (see table 6.3, page 239).

Sharing forecasting information was critical to the entire alliance process and Sun was, by that time, sharing market information with Birkbys. Nevertheless, Sun's attitude to the alliance was questionable and its key people regularly failed to attend meetings. On the



other hand, Birkbys was once again getting low score card results, which fueled Sun's scepticism. This on-going situation contributed to the slow down in alliance activity and suggested the transition to *Stage III* (see table 6.5, page 250).

Lack of written procedures, vague targets and success criteria continued to strain relations. Both companies made concerted efforts to change the situation by implementing specific alliance related projects. This marked the beginning of *Stage IV* (see chapter 6.7, page 260).

By this time, the alliance had matured to the extent that Sun was able to withdraw from day- to- day operations. Birkbys was taking on more work for Sun and as a direct result of this alliance, Birkbys had developed from a middle-sized UK engineering business to be a major company operating internationally. Also, Sun was able to follow its intended strategic direction, developing high value products without having to rely exclusively on Birkbys. The Sun/Birkbys alliance ended, when Birkbys focus changed to working directly for the Sun parent organisation in the USA. The following summarises findings from *Stage V*.

- P5.3 The very act of considering withdrawal can lead to correction that results in revitalisation of the collaboration.***
- P5.4 Serious obstacles to moving on to the next stage include, but are not limited to, incompatibility between objectives and rewards.***
- P5.5 The most significant factor threatening the future of an alliance is lack of investment in, or commitment to, a long-term future.***
- P5.6 Factors emanating from parent companies, or other environmental changes, beyond the control of the immediate allies, may dictate withdrawal.***



## 7.8 RESEARCH QUESTIONS -Summarised

Each question had been addressed in the foregoing chapter and summarised in turn:-

1. How do alliances evolve over time?
2. Are progressive stages evident as the alliance matures and in what way does one stage differentiate itself from another?
3. Given that the degree of interaction, learning and innovation may alter as the alliance relationship develops, what characteristics are evident within each of the stages ?
4. Are certain characteristic more important in one phase of the evolution than in another
5. What factors identify the transition from one stage to another?
6. What factors trigger stability and instability in alliances and what happens when the alliance ends?

- *How do alliances evolve over time?*

The foregoing chapter describes and summarises the three alliances' development through progressive stages as illustrated in figure 7.2, page 280.

- *Are progressive stages evident as the alliance matures and in what way does one stage differentiate itself from another?*

Case studies, presented in chapters four, five and six, define the conceptual framework and support research objectives by demonstrating that the alliances evolved gradually, developed and matured with the passage of time. In order to capture the distilled meaning of each stage, the author has renamed them as follows:-

- |                 |   |
|-----------------|---|
| <i>Stage 0</i>  | <i>Prelude</i> involved preconditions prior to the alliance commencement  |
| <i>Stage I</i>  | <i>Purpose</i> was concerned with understanding basic principles and raising awareness of the level of commitment to be required. |
| <i>Stage II</i> | <i>Process</i> was notable for the intensity of inter-organisational activity.  |



<i>Stage III</i>	Achievement of team objectives and subsequent stagnation, or slowing of the process, was evident in <i>Plateau</i> .
<i>Stage IV</i>	<i>Progress</i> was characterised by process alignment at the communication interface and by enhanced managerial skill and know-how.
<i>Stage V</i>	The process culminated in <i>Parting</i> , when dissolution of relations between partners was considered.

- *Given that the degree of interaction, learning and innovation may alter as the alliance relationship develops, what characteristics are evident within each of the stages ?*

The characteristics that differentiate each stage are discussed and contrasted in chapter 7.1-7.6, pages 280-324. Table 7.16, page 330, presents the characteristics in each stage or phase.

- *Are certain characteristic more important in one phase of the evolution than in another?*

Most were present throughout the duration of each alliance, and stages were distinguished by the type of activities undertaken by the alliance partners (refer to chapters four – six).

- *Did particular events signal the relationship change to another phase?*

In each alliance it was possible to detect subtle changes in participants' behaviour when relations improved, or declined, at a different level in the phasing (see chapter 7.7, page 320).

- *What factors trigger stability and instability in alliances and what happens when the alliance ends?*



Consideration was given to the ending of alliances. Implicit in each stage was the possibility of parting, however, in each alliance investigated, the conditions which prompted such considerations were defused as a result of management intervention.

It would therefore not be necessary to go through *Progress* in order to withdraw from the alliance. The *Plateau* stage might be a most likely exit point, given that each of the alliances had by that time completed the objectives that initiated the collaborative strategy in the first instance. Management options at that point would clearly be to progress and grow or dissolve and choosing the latter option would result in looping back to *Purpose*. With respect to the IDV/Killeen and SCA alliances, both returned to *Purpose*, confirmed new goals and targets and moved into a new cycle and higher level of knowledge. Sun and Birkbys , on the other hand, parted after the *Progress* stage.

Reporting and articulating dynamic evolutionary processes is complicated. Hence, the framework may appear linear with rigid and structured reporting. In reality, the alliances fluctuated back and forth as illustrated in figure 7.2, page 280. Boundaries were often blurred and transition between stages was often recognised through reflection rather than at the moment when the step change was triggered.

Nevertheless, the aim of the thesis has been achieved and research questions answered. The alliance stages have been mapped with dominant characteristics presented in each stage. Table 7.16, page 330, represents a framework of the progressive development.



ALLIANCE STAGE	CHARACTERISTICS
<b>PRELUDE</b>	<ul style="list-style-type: none"> <li>• Alliance agreement</li> <li>• Environmental analysis</li> <li>• History of Working together</li> <li>• Partner Selection</li> <li>• Previous alliance experience</li> <li>• Strategic intent</li> </ul>
<b>PURPOSE</b>	<ul style="list-style-type: none"> <li>• Building Trust</li> <li>• Commitment and Leadership</li> <li>• Communication</li> <li>• Co-ordination and control mechanisms</li> <li>• Learning</li> <li>• Performance metrics</li> <li>• Resource Planning</li> <li>• Setting Objectives</li> </ul>
<b>PROCESS</b>	<ul style="list-style-type: none"> <li>• Compelling Purpose</li> <li>• Conflict Management</li> <li>• Interdependence</li> <li>• Learning and Alliance Skills</li> <li>• Joint Decision Making</li> <li>• Personal Satisfaction and Motivation</li> </ul>
<b>PLATEAU</b>	<ul style="list-style-type: none"> <li>• Adapting cultures</li> <li>• HR Assessment</li> <li>• Performance Plateau</li> <li>• Process and Cost Understanding</li> <li>• Reflection and Learning</li> </ul>
<b>PROGRESS</b>	<ul style="list-style-type: none"> <li>• Cooperating Cultures</li> <li>• Development of Alliance Skills</li> <li>• Joint Innovation and Continuous Improvement</li> <li>• Joint Tacit and Explicit Learning</li> <li>• Process Alignment at Interface</li> <li>• Strategic Review</li> </ul>
<b>PARTING</b>	<ul style="list-style-type: none"> <li>• Use Alliance gained Knowledge to Foster New Relations</li> <li>• Withdraw</li> </ul>

**Table 7.16: Framework of Progressive Relationship Development**

Chapter eight evaluates the findings in comparison with the literature review in Chapters one and two. It also continues to refine the framework and to consider the research questions further.



**Chapter Eight**  
**Discussion - Part II**



## **8.0 DISCUSSION: PART II**

*Aim: To continue the discussion by evaluating findings in relation to academic literature*

The objectives are to :-

- consider the evolutionary process of alliance development
- assess whether dominant characteristics in the conceptual framework agree with relevant literature
- establish whether findings from this study have been corroborated by past research
- present a framework of alliance evolution

### **8.1 THE EVOLUTIONARY PROCESS OF ALLIANCE DEVELOPMENT**

According to Nelson and Winter (1982: 9-10), organisations are usually much better at self-maintenance than they are in situations of major change. These authors explain that the broader meaning of “evolutionary” includes a concern with the process of long-term progressive change. Furthermore, they go on to suggest that stability, observable in the present, may result from past routines and dynamic processes and that quite a different future than expected may emerge as a consequence of those same processes (ibid.10). Harrigan (1986), states that joint ventures are a transitional form of management; an intermediate step on the way to something else.

This evolutionary perspective is consistent with other authors whose work supports stages in alliance development (see for example Ellram 1991; Murray and Mahon 1993; Spekman et al 1998, also refer to chapter two, pages 52-80) and in this context, Ford (1980:341), for example, cites five stages in the evolution of an alliance. The idea that an evolutionary pattern may exist has important implications as regards managers’ and academics’ understanding of the key aspects of forming and managing strategic alliances (Lorange and Roos 1993: 92). Ford (1980: 341) suggests that because of ongoing adaptations as the alliance matures, it is as important to analyse the overall relationship, as well as the separate incidents which comprise it.



Hence, the overall development process was as important as the daily dynamics of the ventures. Events described in the case studies took place within the context of maturing alliances, and were influenced by relationship norms and attitudes. The point at issue is that many different forces were exerted throughout the duration of the alliances and some were more important at specific times. Consequently, although there appeared to be dominant characteristics within each stage, many of these attributes were present in varying degrees of intensity in every stage (see table 7.16, page 330). Trust and commitment were such characteristics and Wilson (1995) describes these as *latent constructs*, which depended on the atmosphere of cooperation, or conflict, prevailing at that particular time.

A number of scholars have recognised that strategic alliances develop in phases, however the obvious difference amongst models cited in chapter two is the number of stages identified and the names and characteristics attributed to each stage. With respect to this study, the data supports six distinct phases, which have been termed *Prelude*, *Purpose*, *Process*, *Plateau*, *Progress* and *Parting*. These will now be summarised in the light of the literature bearing on the subject. Dominant characteristics within each stage will also be discussed and distilled further, where appropriate, to present a framework of alliance development, which is the principal objective of this thesis.

## 8.2 STAGE 0 - PRELUDE

This stage, setting the preconditions for the alliance, has been well documented in literature pertaining to exchange relationships (see for example Ford 1990; D'Aunno and Zuckerman 1987; Frazier Spekman and O'Neil, 1988; Dwyer, Schurr and Oh, 1987). Most of these scholars have suggested that this preliminary stage has a path dependent influence on an alliance and upon its final outcome (for example Cohen and Levinthal 1990, Gomes and Casseres 1996).

The attributes in *Prelude* appeared to be linked and to have exerted an influence on each other to varying degrees as the alliance evolved. In the first instance, alliance objectives had a greater tendency to elaborate the customer organisation's strategy as compared with



that of the supplier. Even if joint discussion had taken place by this stage, suppliers were not absolutely clear about the rationale behind the changes or their own performance expectations. It was only when the alliances began to operate in earnest, that anomalies in the agreement became obvious (see also D'Aunno and Zuckerman 1987; Gray 1989).

### **Alliance Agreement**

The alliance agreement was an important document, no matter how explicit or informal, as it should have laid out the rules regarding expectations of behaviour and performance by all the parties. If the agreement was flawed or lacking, for whatever reason, during the formative stages the alliances were put under stress. Misperceptions led to mistrust and contributed to problems of poor communication and performance (refer to 1.1.7, page 10; section 1.5, page 43)

The necessity for a clear and detailed alliance agreement has been emphasised in the majority of the process models summarised in Chapter two of the literature review (see also Macbeth and Ferguson 1994:171). Ring and Van de Ven (1994) and Murray and Mahon (1993), specifically mention a contractual agreement, while others, (for example Frazier et al 1988, and D'Aunno and Zuckerman 1987), describe how rules, procedures and expectations must be articulated between the parties; although the agreement may be either a formal or a psychological one. On the whole, scholars were consistent in that the contract must include the ground rules, define purpose and structure, cover membership criteria and performance expectations.

Cherrett (1994) points out that if the contract is formal and the anticipated duration explicit within the agreement, sufficient confidence was likely to be generated to persuade the partners to continue to invest in the alliance. However, whether formal or informal, close working relations over an extended period of time depended on trust (see for example Sako 1992, 1998) and teamwork (see for example Barney and Hansen 1994).



Joint performance targets need to be established through an ongoing process of negotiation and re-evaluation (see Zajac and Olsen 1993, Doz 1996). In accordance with literature, repeated interaction and adaptation by the allies stimulated the transfer of knowledge between the partners (refer to Dodgson 1991; Mohr and Spekman 1994; also chapter 1.3, page 36). In the opinion of Zajac and Olsen (1993) know-how was more easily transferred through relational rather than a transactional exchanges.

### **Environmental Analysis**

Long-term strategic planning can be very difficult in a turbulent industrial environment. This affected each of the alliances examined and meant that the companies were subject to regular re-organisation. Mission statements declared in the alliance agreements reflected both present and future aspirations and acted as a reminder of the way the companies intended to behave. In this way, strategy and objectives could be adapted to fit together as internal and external conditions dictated (see also Murray and Mahon 1993; Dyer and Singh 1998).

The business case and alliance rationale were also reflected as part of the strategic objectives in the agreement, which should have been signed off by all partners (see for example Lorange and Roos 1993). Other characteristics, namely previous alliance experience, history of working together, organisational readiness and cultural compatibility, all had an influence on attitudes within the companies towards cooperative working (see chapter 1.1.7, page 10 and 1.1.13, page 20).

### **Partner Selection (including cultural compatibility, history of working together and previous alliance experience)**

Partner selection was seen as a principal activity prior to the alliances and an issue critical to success (See Tenbrunsel et al 1999). All the process models have this characteristic in common (see chapter two). The procedure used by each alliance founder identified the



attributes of the potential partner in terms of specific criteria, such as performance evaluation, proximity, complimentary skills and knowledge (refer to 1.1.7, page 11).

Cultural compatibility was a matter that might have been given more careful consideration by companies seeking alliance partners (see for example Brourthers et al 1995). This point is deemed as most important by a number of authors, for example Gray (1989). However, the organisational cultures seemed to have been scarcely, if at all, influenced by the alliances, although with the passage of time, shared values fostered positive attitudes regarding the alliances and led to greater commitment by the participants (refer to 1.1.7, page 10 and page 23). In all cases, companies that had little or no experience of alliances, were breaking new ground.

In each of the alliances investigated, participants gradually learned skills appropriate to managing the alliance (refer to chapter 1.3; also Doz 1996; Spekman et al 1998). Thus selecting a partner with alliance management experience may provide a basis for a more long-term and stable relationship than one with none at all. Although the results from this study indicate that the allies did not attach any significance to selecting partners who had alliance experience, the individuals who initiated the strategy brought their alliance knowledge to the new alliance.

It would therefore seem when considering a potential partner, that skill in managing successful alliances would be as important a selection criteria as choosing partners with reputations for technical ability or quality. Only in Gray's (1989) model was previous alliance experience mentioned as an important criterion in alliance success.

Ellram (1991) suggests that the decision to enter into a strategic alliance, especially for firms with little previous experience of such relationships, may represent a major philosophical shift. With respect to this study, although changes in attitudes were evident among those directly involved in the relationship, the wider organisation was little influenced. Competitive tendering and traditional contracts were still considered a more acceptable way of seeking suppliers, as apparent safeguards from exploitation.



Larson (1992) suggests that a precondition for an exchange was prior trading relations. This study appears to contradict previous research findings on the importance of past working relations to alliance success. Indeed, experience based on traditional, arms-length working relations, may have required unlearning in the first instance, to break down old attitudes and perceptions (see Huber 1996, also section 1.3). A comparison suggests that all the organisations examined started from roughly the same point, despite a varied history of previous working relations.

### **Strategic Intent (including organisational readiness)**

Alliance literature maintains that the strategic motivation to cooperate is influenced by an organisation's environment and stresses the need to seek competitive advantage. The lifecycle models of Wilson (1978), D'Aunno and Zuckerman (1987) and Gray (1989) advocate evaluation of the trading conditions facing the firm prior to forming an alliance. Strategic intent was discussed as an alliance precondition and motive in all the process models cited in chapter two. The predominant incentive was either organisational survival, environmentally derived, or as means of achieving competitive advantage (see for example Murray and Mahon 1993; see also 1.1.4). The decision to enter into a strategic alliance represents in itself a major issue for study.

In certain circumstances it may not be certain whether the alliance route is necessarily the most appropriate strategy to achieve objectives. This was particular to the SCA, which had a very turbulent history throughout. Paradoxically, this alliance was abrasive and yet remained stable, in that the participants continued to work towards joint goals. Understanding currently prevailing conditions and anticipating the future market environment was essential to ensure that developing the alliances was the most appropriate strategy. The initial motivation for all three alliances in response to competitive pressures or market turbulence was to endeavour to reduce costs (refer to chapter 1.1).

Although each alliance began with the intent to reduce costs, over time, this narrow focus, although always present, was superseded by ways to create joint value through innovative



solutions to operational problems (refer to Zajac and Olsen 1993; also chapter 1.3, page 36 and 1.4, page 39).

External and internal evaluation, prior to the alliance commencement, might have saved time and perhaps helped to avoid mistrust and disappointment. Much loss of time and energy could have been avoided by anticipating problems and by better planning. Lorange and Roos (1992:51) emphasise the need for detailed analytical efforts culminating in a business plan. As it was, early negotiations encouraged the partners to interact and the alliances took off quickly, and with great enthusiasm.

Taking the time to evaluate whether the organisation is ready for such a radical change, analysing the cost and benefits of implementing and operating an alliance strategy, as well as selecting partners carefully, means that organisations are more likely to overcome some of the inherent problems in the early stages (see also Dwyer et al 1987, page 59; D'Aunno and Zuckerman 1987, page 57; Schmitz et al 1995, page 69).

Alliance Fit represents the dominant characteristics and associated sub-criteria in the first stage. Each characteristic influenced another and ongoing evaluation of both external and internal requirements ultimately changed the structure and focus of the alliances. The final distillation of characteristics in this stage, are illustrated in table 8.1.

External Fit	Internal fit	Alliance fit
Environmental analysis	<b>Partner selection including</b> <ul style="list-style-type: none"><li>• Cultural compatibly</li><li>• History of working together</li><li>• Previous alliance experience</li></ul> <b>Strategic intent including</b> <ul style="list-style-type: none"><li>• Organisation readiness assessment</li><li>• Cost / benefit analysis</li></ul>	= Alliance agreement

Table 8.1: Alliance Fit



### 8.3 STAGE I - PURPOSE

During the *Purpose* stage, people began to understand the principles motivating the organisations and they also became aware of the considerable commitment involved in business alliances. Although trust between members fluctuated during this stage, it could have, and should have, been promoted by senior management. Investment requirements in terms of number of people and resource requirements might not have been accurately calculated and performance, as compared with hoped for potential, had changed little. Cost drivers and waste had not yet been identified and were still embedded in the supply chain.

Equally important were a strong performance focus, accurate measurement and continuous reporting, as well as a professional work ethic. The *Purpose* stage was where participants built trust, identified resource requirements, learnt strategic objectives and started to understand the ally company (see chapter 2.1, page 52, where these characteristics are also present in the process models).

The *Purpose* stage proved to be enervating for all parties and everyone had to reconsider his effectiveness as a team player. In large measure, lack of openness and mistrust was able to be resolved primarily because of the high level of interaction and people feeling more at ease with one another.

#### **Building Trust (including Commitment and Leadership)**

Trust was as much an ingredient of cooperation as a product of it and gradually confidence increased as parties got to know each other (see Ellram 1991). Reciprocity was demonstrated by changing behaviour and by tangible benefits in the form of increased profit or reduced costs (refer to chapter 1.5, page 43).

According to Granovetter (1985) and Etzioni (1988), trust is fundamental to our social fabric and an essential factor in all market transactions. Trust is at the heart of good



business and social relations and provides the fertile ground for every business endeavour (refer to chapter 1.5).

In the cases examined by the author and corroborated by D'Aunno and Zuckerman 1987), confidence created favourable conditions for developments that had not been anticipated by the actors at the outset. Time and experience had an important bearing as, only when it was evident that the alliance was benefiting the participants, did trust improve and interaction increase.

In a cooperative atmosphere the companies were eventually able to look beyond cost minimisation, to longer term value creating relations (see also Zajac and Olsen 1993; Doz 1996). However, the alliances required sensitive management when lack of apparent progress led to frustration. In a hostile environment trust was easily undermined and stimulated a reduction in communication and loss of confidence (chapter 1.5.4, page 48).

Trust helped to stabilise relations and promoted information exchange. Maintenance of confidence between the companies was an essential element in such periods of crisis. In each alliance, communication was fundamental to confidence and sharing technical information demonstrated this. Often sharing confidential information can be difficult but information disclosure between senior management helped the partner companies break down communication barriers. As a result of cooperation at a senior level this cascaded down into the teams as corroborated by the work of Ford 1984 and Gulati 1995 (see also chapter 1.1.7, page 10 and 1.5, page 44).

When trust was at a high point the alliances achieved mutual benefits by exploiting opportunities and encouraging innovation and creativity. Literature (for example Gomes-Casseres 1996) has provided evidence supporting the propositions that alliancing involves continual investment of effort and pooling of the partners' capabilities to mould current and future alliance strategies.



This conclusion was reached by Creed and Miles (1996), who suggest that organisational forms and management philosophies shape issues of trust in organisations. Trusting behaviour required cooperating firms to sacrifice short-term gains for longer term benefit. This initially involved increased transaction costs in terms of time and effort. However, literature supports the notion that lack of trust is costlier. In conditions of declining trust, transaction costs increase as companies make provision for having to contend with opportunistic behaviour (see also chapter 1.5, page 44).

Transaction cost economics refers to a behavioural assumption concerning bounded rationality (1.1.10, page 14). When bounded rationality is great, companies will increase transaction costs by imposing costly control mechanisms. Trusting relations reduced behavioural uncertainty and, according to Bradach and Eccles, (1989) is seen as a mechanism of social control (refer chapter 1.5).

Commitment was individually driven as opposed to being an explicit part of corporate strategy. The role that directors took was vital in each alliance. They set initial objectives, communicated a vision, influenced stakeholders, steered the change process, negotiated for resources, brought key individuals together, and encouraged ownership and commitment.

Commitment and leadership were considered critical in successful business alliances. Commitment was seen as a measure of the importance of the relationship in terms of the inputs each party was prepared to make (see Hardwick and Ford 1986). Perceptions of partner's commitment, affected behaviour and set precedents for future action, good or bad. According to Brouther et al (1995), commitment can be measured by the degree of risk the parties are prepared to take. If nothing is at risk then there is little incentive to cooperate. Commitment is an important component of the process models summarised in chapter two.

Commitment and leadership from top management must be evident and continuously and clearly articulated to every level (see Dodgson 1991). This feature of role and personal interaction has been described by Ring and Van de Ven (1994).



## **Coordination and Control (including Communication, Teamwork and Performance Metrics)**

Spekman et al's (1998) approach to strategic alliances reinforced the need for team leaders and managers to positively communicate the corporate strategy and to encourage an alliance mindset. This involved seminars and training meetings to communicate alliance strategy and objectives and to clarify roles and responsibilities in a comprehensive programme of education. In the particular cases studied, only the supplier partner undertook such activities.

Mechanisms for co-ordination and control are crucial in business. Literature supports this study, in that control mechanisms changed and became more rigorous as the alliance developed. Initial terms of governance, set out in a formal contract or informal understanding, should include mechanisms to assess alliance performance.

Changing expectations were inevitable (see Zajac and Olsen 1993). In practice, control was fine-tuned to suit the particular alliance as a result of cycles of learning, adjustment and revaluation (see Doz 1996). According to Larson (1992), effective control and co-ordination is also achieved, and opportunism avoided, by sticking to moral obligations and preserving reputations.

Proponents of transaction costs theory (e.g. Williamson 1975; 1985), recognise the importance of socially oriented forms of governance. From a resource based theoretical perspective (see for example Penrose 1959, 1985; see also 1.1.9, page 13), trust is considered an isolating mechanism, or hidden capability that differentiates one firm from another (1.1.13, page 20). This only applied if both parties in the alliance gained advantage and were confident of not being exploited (see for example Barney and Hansen 1994).

A potential source of conflict was the fact that the partners were unsure how much, and what information, could be disclosed to an ally. This could be dealt with in the alliance agreement as each company had, to a certain degree, to protect itself from creating a



competitor. Gray's (1980) collaboration model stipulated that mechanisms for protection and transfer of intellectual property must be considered. However, in the cases in this study, the matter of protecting Intellectual Property Rights (IPR) was not considered at all.

According to inter-organisational exchange literature, for example Gray (1989), Zajac and Olsen (1993), Schmitz (1995) and Doz (1996), it takes time for companies to establish new mechanisms to operate effectively and this has also been borne out in the author's study. Through a process of mutual exchange and with the passage of time, the value of the alliance became clearer. Although at the outset performance measures may have been biased or inaccurate, by periodic evaluation, the alliance metrics improved and evolved to more accurately assess performance. Ongoing monitoring and evaluation provided the basis for more auditing (refer to chapter 1.1.7, page 10).

## **Learning**

In all three cases informal networks were built up and people, who would never have talked to one another in the past, had been doing so. This is in line with the work of Debresson and Ammesse (1991), which says that the exchange of ideas between ally companies stimulates the search for, and analysis of, opportunities and that the result is the generation of collective knowledge (refer to chapter 1.1.13, page 27; 1.2, page 30-36)

It was not just that technical skills were prized in the alliance environment; individual social skills were equally important (refer to 1.3, page 36; 1.4, page 39)). Central to alliance governance was trust and social cohesion and the need for these became evident as the participants interacted (refer to chapter 1.5, page 43). Through teamwork, potential savings were identified which reinforced continued commitment to the alliance. Information exchange in turn reduced uncertainty and risk among the allies and at the same time interdependency between the allies generated shared values. The start of value creation was when inter-organisational teamwork on cost saving and process improving cut waste and increased quality (see chapter 1.2, page 20).



Alliance literature supports the findings that increased communication and information sharing has been shown to contribute to bringing down costs, eliminating waste and encouraging the transfer of knowledge that enables development of joint processes and procedures. Also, emphasised in literature, is that such advantages are only realisable through teamwork and shared trust between the partners (see section 1.1.12, page 19; chapter 1.2, page 20; 1.5, page 43).

The alliances encouraged transfer of knowledge, and, in so doing, developed unique relationship specific intangible assets, such as understanding processes. According to literature, acquisition of knowledge relies on social and economic networks, as companies develop routines and dynamic capabilities (see chapter 1.3, page 36 and 1.4, page 39). From a resource based perspective the firm is considered to be a pool of productive and interdependent resources (Penrose 1959; see chapter 1.1.11, page 16).

The importance of learning is explicit in the process models of Zajac and Olsen (1994), Doz (1996), Ring and Van de Ven (1994), Spekman et al (1998). Alliance literature supports the notion that collaboration accelerates knowledge exchange and creates channels for acquiring new knowledge (see chapter 1.1.3, page 22; 1.3, page 36). Learning is therefore considered an important outcome of collaboration and, according to scholars including Mody (1990) and Ciborra (1991), knowledge helps firms to deal with uncertainty. At the same time, alliances enabled partners to gain both tacit and explicit organisational know how.

### **Setting Objectives (including Resource Planning)**

Strategy scholars suggest that setting clear objectives is one of the key features that contribute to strategic success (see for example Andrews 1980, Grant 1995). Alliance literature cites that clarity of focus is vital. According to Lynch (1991) ambiguous objectives and uncoordinated activities are the main reasons for alliance failure.



Dyer and Ouchi's (1993) research into relations between suppliers and manufacturers in the automotive industry, concludes that frequent and planned dialogue reduced transaction costs and eliminated inefficiency (refer to chapter 1.1.6, page 8). This is supported in inter-organisational exchange literature which stresses that objectives and goals must be compatible and subject to continual modification throughout an alliance (refer to chapter 1.1.7, page 12; Gray 1989; Ring and Van de Ven 1994; Doz 1996 in chapter 2.0, page 32). Long-term objectives and strategies help to continually reaffirm and maintain people's enthusiasm and facilitate grasping of opportunities.

In this way, in the alliances which were the subject of this study, long-term objectives were maintained and short-term ones modified to meet changing circumstances. This enabled the participants to assess changes in the strategic position of the alliance, the capabilities of the partners and to identify how to adjust objectives appropriately.

The importance of adequate resources is supported in alliance literature (see section 1.1.11, page 16). At the outset, resources allocated to the alliance process have to be considerable and there needs to be a continual and on-going re-evaluation as the alliance evolves.

These findings are reinforced by Monczka (1993;1998), where team effectiveness is directly related to key resources (see chapter 1.5, page 43). Boddy et al's (1998) survey of barriers to partnering, identified that adequate resources are essential to alliance success. In the study cases, resource requirements were planned and managed efficiently and constant interaction by the partners meant an early involvement in product development, in search for alternative methods of manufacture and sourcing of new materials (see chapter 1.1.4, page 4).

Table 8.2 summaries the dominant characteristics and sub criteria in *Purpose* which have been further distilled from table 7.16, page 330.



Dominant Characteristics and Sub-Criteria in Purpose	
BUILDING TRUST	Commitment Leadership
CO-ORDINATION AND CONTROL	Communication Performance Metrics
LEARNING	
SETTING OBJECTIVES	Resource Planning

Table 8.2: Main Characteristics in Purpose

8.4 STAGE II -PROCESS

The *Process* period in alliances usually involved intense team activity when players were keenly driven and motivated. Trust increased as people became more accustomed to each other and when it was plain that everyone was working towards mutual goals (refer to chapter 1.1.7, page 12). Demonstrations of trust generated a sense of responsibility and commitment. Performance improved as information sharing reduced bottlenecks in communication and particular encouragement came from quick success.

Realisation dawned that, although still unspecified, there was a multiplicity of opportunities for cutting costs. Much inefficiency was still in the system and the focus of the process stage was to identify and eliminate wasteful activities. Generally, there was a rise in alliance expenditure, that is, an increase in transaction costs due to increased use of resources as inter-organisational teams tackled ambitious projects to raise quality and increase flexibility.

Communication barriers were lowered or even removed and there was a new awareness of the interdependency of work between the partner companies. Secondment of personnel provided opportunities to accelerate understanding of alliance partners’ business, while



adapting common norms and joint problem solving helped to bring the partners closer together.

Academic literature supports the broad thrust of this study, in that as benefits of knowledge exchange began to become apparent, shared values and expectations were reinforced and as a result both actual and perceived commitment to the alliance process grew (see chapter 1.1.7, page 10).

**Compelling Purpose** (includes, inter-organisational teamwork, personal satisfaction and motivation)

Teamwork was the force driving the parties. In an atmosphere, described by Wilson (1978) of social and structural bonding that discouraged opportunistic behaviour, governance was based on optimism and trust during the *Process* phase. According to Barney and Hansen (1994) if team members cannot trust one another, unwillingness to cooperate and to share information will sabotage future decisions. As trust was directly related to frequency of interaction, communication and feedback was therefore critical in maintaining momentum (see also chapter 1.5, page 43).

Despite the fact that transaction costs may have increased during the Process phase due to the level of resources the alliance demanded, projects were starting to identify cost drivers and waste. This meant that the inter-organisational teams were beginning to calculate estimates of potential savings and technical and process know-how was starting to be exchanged. In this context, according to Parkhe (1991;1993), relation-specific assets accumulate over time as the alliance partners investigated new ways of improving performance.

### **Conflict Management**

The alliances were often abrasive and even acrimonious. Zajac and Olsen's (1993), transactional value model supports the finding that, although conflict between alliance



partners was an obstacle to value maximisation, nevertheless norms for managing conflict were required. Despite the wrangling, ongoing re-evaluation and negotiation to minimise conflict and come to consensus solutions were implicit in all alliance lifecycle models. Gray (1989) suggests that because of continual efforts to resolve conflict, a priori, compatibility between partners is not necessarily a pre-requisite for successful alliances.

### **Interdependence (including joint decision making)**

Interdependence was linked with the partners' shared ambition to maximise value. According to Fiol and Lyles (1985) interdependence gives rise to associations, cognitive systems and memories, that become a repository for organisational learning (refer to chapter 1.3, page 36).

Literature supports the evidence from this study that the alliances evolved, passing through a sequence of interactive cycles of learning, reevaluation and adjustment in which people were encouraged to be innovative and creative ( see for example Doz 1996, chapter 2.1.13, page 68).

Joint decision making was intrinsic to alliance success, as is borne out in process literature (see chapter 2.0, page 52). Effective decisions depended upon cooperation and on an inter-organisational team members' ability to draw upon a larger social and knowledge network. Informal networks and growing interdependence meant that decisions could be made on the spot (see chapter 1.4, page 39).

### **Learning and Alliance Skills**

Projects were stretching people's capabilities and problem solving skills. According to Wageman (1997), inter-organisational teams encouraged learning and adaptability, while Clark and Wheelwright (1992) suggest that such teams improve commitment and performance.



Learning from interaction by the ally companies extended to networks outside the organisations, so that people were beginning to influence others outwith the immediate alliance (see chapter 1.4, page 39). Inter-organisational team activities encouraged information sharing and problem solving and this was the start for managing the dynamic process of knowledge creation (see chapter 1.3, page 36).

Although experience was difficult to transfer, nevertheless cooperation encouraged more effective use of specific knowledge to develop procedures and techniques. In this sense, operational and business strategy were no longer separate in the alliance environment (see also Larson 1992 and Shmitz et al 1995) .

Research into networks has provided evidence that exchange of knowledge and mutual learning was a network embedded capability and critical to competitiveness. According to Liparini and Sobrero (1994) cooperation among firms maximises firm-specific capabilities. Ancona and Caldwell (1988) state that team performance is related to the degree of boundary spanning activity and successful results usually involve dependence on other groups. According to Szulanski (1996) communication across boundaries stimulates learning because issues are better understood and objectives more clearly defined .

With regard to the thesis studies, instead of only looking at their own work, people's perspective had changed and this was manifested in a new cooperative outlook. Monzcka (1993) suggests that understanding what drives effort is very important, as team members are not always guaranteed to exert themselves to complete assignments. Other factors associated with Lawler's (1986,1992) work, recommends that management commitment, adequate resources, empowerment, training and rewards related to performance are also important factors that contribute to satisfaction and motivation.

Table 8.3 below summarises the main characteristics and sub-criteria in *Process*, distilled from table 7.16, page 330.



Dominant Characteristics and Sub-Criteria in Process
<p><b>COMPELLING PURPOSE</b></p> <p>Team work Personal Satisfaction and Motivation</p>
<p><b>CONFLICT MANAGEMENT</b></p>
<p><b>INTERDEPENDENCE</b></p> <p>Joint decision-making</p>
<p><b>LEARNING AND ALLIANCE SKILLS</b></p>

Table 8.3: Main Characteristics and Sub-Criteria in Process.

8.5 STAGE III - PLATEAU

Although a sense of optimism persisted, many of the teams had by now completed their projects. A *plateau* was attained and new objectives were undefined. A dip in both resource spend and team activity appeared symptomatic. Nevertheless, the alliance companies overall performance was higher than it had been at the beginning and the improvements were sustainable.

By this important stage, improvements had achieved the goals of costs and waste reduction from processes and systems. It therefore was a watershed in the cooperative relations, although detailed issues still remained unresolved. The *Plateau* was a time of consolidation when the companies required to re-examine original values that had stimulated the alliance in the first instance.

Adapting Cultures

Academic literature pertaining to inter-organisational exchange emphasises the importance of shared values in business exchanges. For example Dwyer et al (1988) reinforces the finding of this study, in that norms tend to develop over time and are more likely to be adhered to, if organisations expect collaboration to extend into the future. Larson (1992) calls these reciprocal norms. Academics, for example, Ghemawat 1991 and Morgan and



Hunt 1994, point out that continuous commitment presumes a value system that is shared between the partners.

Teams were self-disciplining and held work expectations in common. In order to build on achievements, the members periodically re-appraised objectives and targets. Polley and Dyne (1994) suggest this is a characteristic of self-managed teams and that control over norms impacts on overall effectiveness.

Scholars such as (Larson 1992) support this study, which found that individuals who believed in the power of cooperation, contributed their values and philosophy into the organisation. Steers (1981) defines norms as mutual shared standards that serve to regulate. This is echoed by Larson (1992), who notes that norms act as social bonds helping to maintain alliance stability.

Gray's (1989) collaboration model, emphasises that internal learning stimulates modifications in human resource profiles also reassignment of roles or changes in team composition. These findings are further corroborated by Buchanan (1975), who suggests that organisational experience must satisfy individual needs in areas such as scope of the job. Equally important to an individual's job satisfaction was the building of cohesive work groups, communicating the corporate mission to both individuals and groups and designing career development structures.

Dodgson (1991), maintains that human resource management systems, such as reward and appraisal, need to be in line with the company culture. In all cases, people's jobs increased in scope and responsibility although formal Human Resource policies remained unaffected by business cooperation (refer to Spekman et al 1998, chapter 2.1.15, page71).

### **Performance Plateau**

Murray and Mahon (1993) consider the *Plateau* stage to be a maintenance phase. Similarly Ford (1980) and Larson (1992) describe it as a period in the alliance characterised by routine operations and reporting, when a steady exchange of information and



communication become increasingly institutionalised. Larson (1992), refers to this as operational and strategic integration.

In the first instance, participants were concerned with smoothing the process that interfaced the organisations. Once this was complete, a set of high level objectives were necessary and as the alliances developed and governance structures matured, strategic integration became possible. According to Larson (1992), strategic integration extends well beyond routine administrative co-ordination to new joint projects to improve old, or to develop new, products and systems. Structures and systems between the companies were seen to be linked in mutually beneficial, strategic ways

### **Reflection and Learning**

Recognising the importance of learning is stressed in inter-organisational exchange literature and this is quite explicit in a number of models (see Doz 1996; Spekman et al 1998).

Personnel, in particular, were much more customer focused. Alliance literature supports this finding and scholars such as Nelson and Winter (1982), Itami (1987) and Spender (1996), suggest that a company's competitive advantage depends mainly on its knowledge based intangible assets. Yves Doz (1989) considers the acquisition and development of unique non-tradable assets, or knowledge, to be a key factor in differentiating successful and unsuccessful strategies.

Supplier companies better understood the vagaries of the customers' market place as a result of access to detailed market information. Improvements due to sharing operational practices eventually became routine (refer to chapter 1.1.13, page 20). There were considerable opportunities to transfer know-how and process understanding between the alliance partners (refer to chapter 1.3, page 36). This focus on operational and process efficiency helped reduce cost and enabled the partners to concentrate on adding value and creating better products and services. Emphasis on the process, rather than managing



vertical departments, encouraged communication and information sharing. Simultaneously, interaction across company and group boundaries encouraged the use of a common language. Transference of information between organisations meant that individuals and teams gained knowledge from a wide set of people which would, in the course of time, diffuse within and between the organisations.

As well as developing personal contacts, the companies created a series of joint institutions to manage the relationships. This is in agreement with Ford’s (1980) description of the final stage of an alliance, when institutionalisation is to be expected. Table 8.4 summarises the characteristics in *Plateau*.

Dominant Characteristics and Sub-Criteria in Plateau	
ADAPTING CULTURES	
	Relationship norms Human Resource Management
PERFORMANCE PLATEAU	
	Relationship maintenance Operational routines
REFLECTION AND LEARNING	
	Process and cost understanding

Table 8.4. Characteristics and Sub-Criteria in Plateau

### 8.6 STAGE IV - PROGRESS

The *Progress* stage was the springboard, when performance improved as a whole, rather than sub-optimally, within each organisation. Serial activities and redundant steps were eliminated and costs reduced. Companies, were able to move into the *Progress* stage, and had the opportunity to sustain the alliance on a continuous basis. The relationships were mature enough to accept radical change in terms of structures and processes, although a step change is needed to move forward. The *Progress* stage was characterised by a cooperative culture at the alliance interface, unique relationship specific competencies and



by integrating management skill and experience into a joint organisational memory. Accountability for, and identification of, failure was a powerful element in the process of learning. However, the objective was to encourage risk transparency and to reduce uncertainty in the pursuit of improved performance.

Early analysis by all involved ensured that cause and effect could be more accurately linked. On these occasions companies learned and gained by dissemination of learning to internalise new routines and avoid unnecessary repetition. A shared sense of purpose transcended individual ambition. Rather than wasting resources, a new way forward was identified together to achieve common goals. Such behaviour served to strengthen the alliance during difficult times.

### **Cooperating Cultures**

The alliances were built upon agreements by business partners which depended on trust, commitment and reputation. According to Ring and Van de Ven (1994) the development of such institutions evidently demonstrates that it occurs in environments where collective identity, commitment and values were shared. Lewicki and Bunker (1996), describe this as identification-based trust. This is echoed by Deutsch (1957) and also Sheppard and Sherman (1998) who propose that time, proximity, shared identity, common incentives and negotiation of a mutual ethos are factors that lead to the evolution of similar goals and beliefs.

This cooperative culture relied on positively motivating people and encouraging a teamwork ethos. The inter-organisational teams were constituted so that people from separate organisations could develop new strategically significant capabilities. Aligning these skills with corporate objectives meant that supply issues and business decision-making processes were integrated to maximum effect (refer to chapter 1.2, page 30).

Embedded or tacit knowledge resided primarily in individuals and teams. In particular, it depended on norms, attitudes, information flows, and decisions that shaped dealing with



others. While this is sometimes termed “culture”, Peter Selznick (1957) describes it as “distinctive competencies”, to indicate the important role that these factors play in an organisation’s success, or indeed failure.

Miles and Snow (1994) term this as a “fit” between the internal and external environments and the writers say that to achieve that “fit” is a journey rather than a destination. It should be appreciated therefore, that a firm’s strategy has to be flexible and creative and Tomer (1987) and Hastings (1989) recognise the role played by organisational values and goals. A large part of the alliance’s stock of knowledge was tacit and social. In other words, that knowledge was produced and reproduced in a social setting (refer to chapter 1.3, page 36).

Coleman (1988) describes people’s ability to work together for common purpose as “social capital”. The concept of “human capital” (see Itami 1987) recognises the importance of people’s knowledge and expertise to organisations. Coleman (1988) contends that in addition to skills and knowledge, social capital is the ability to develop shared norms and values (refer to chapter 1.4, page 39).

### **Development of Alliance Skills**

According to Amit and Schoemaker (1993), these capabilities are developed through exchanges of information between personnel. The processes are firm specific and are built up with the passage of time. (see chapter 1.1.11, page 16).

The basic concept of the resource-based view, is that a firm’s competitive position is derived from a bundle of unique resources and relationships. Resources, categorised in research literature, include physical capital (Williamson 1975), human capital, both tangible and intangible (Itami and Roehl 1987), and organisational capital (Tomer 1986). The task of managers is to renew these resources and relationships, as time, competition and change erode their value (Rumelt 1984:557-58).



Relating this to cooperative management, commercial rewards can only be realised if firms partner with organisations with “complementary assets” (Teece et al 1997). Collaboration between people with diverse talents enabled specialist skills to be available and complex tacit knowledge to be transferred and technologies released (Barney 1986).

Cooperative skills learnt over the past few years, became increasingly important and the ability to think creatively and develop solutions continued to benefit all the alliance parties (see chapter 1.3, page 36). Each company experienced considerable learning that it could also use to good effect with other customers and suppliers. In essence therefore, alliancing had changed the way the companies worked together. Prahalad and Bettis (1986) describe this as “dominant general management logic”; a cognitive concept operationalised through shared activities that create interdependence between the businesses.

Spekman et al's (1998) approach to strategic alliances, specifically emphasised that managers involved must develop an “alliance mindset”. Managers who hold to this perspective, mark out learning and creativity as the makings of the strongest alliances. Therefore, strategic decisions are not only choices about allocation of resources, but also about what a company can learn and the extent to which it can do so, alone or through collaborative agreement (Badaracco 1991:14).

Knowledge was generally recognised as being a crucial component in the struggle to improve competitiveness, to enable an organisation to go through a process of self-renewal and expand its boundaries. One of the objectives of cooperation between customers and suppliers is the generation of internal knowledge (Richter and Vettel 1995). According to Peteraf (1993), growth and renewal is consistent with the Ricardian view of rents and competitive advantage. Quasi-fixed resources may be renewed and expanded incrementally by the firms using them .

The resource based view of an enterprise depends upon the latter developing distinctive capability. It provides a better understanding of the uniqueness of firms, as well as the crucial role that teamwork and cooperation has in the matter (see chapter 1.1.11, page 16).



## **Joint Innovation (including Continuous Improvement)**

Innovation had now been recognised as the most important means of seeking and maintaining competitive edge (see also chapter 1.4, page 39). Creativity lay at the heart of this change and inter-organisational teams were the vehicles driving innovation.

Inter-organisational teamwork encouraged learning at many levels and functions in business and, in so doing, developed relationship specific know-how in both the customer and supplier organisations. As this was difficult to transfer and costly for rivals to copy, affiliate businesses became jointly more efficient by facilitating continuous transfer of knowledge and new joint capabilities. Likewise, learning was promoted as customer and personnel in both companies better understood each other's processes. Thus, incremental and on going innovation and continuous improvement became embedded in the alliance philosophy (see chapter 1.2, page 30 and 1.3, page 36).

Also, creative activity had a knock on effect on the supply chain networks where loose or strong links were forged, depending on the expertise required at a particular point in time. Teubal et al (1968) argue that networks foster innovation beyond the scope of bilateral supplier-buyer links.

The most commonly held notion of knowledge and ability was that these intangible assets, deep-seated within the firm, were controlled by routines, practices, cultures and working relationships. However, it also appeared that close relations between a firm and an external organisation, such as a customer or supplier, often provided an opportunity for specialised knowledge and abilities to take root, grow and be assimilated (see chapter 1.3, page 36).

Theorists have tried to distinguish between various levels of learning, such as higher and lower level learning (Fiol and Lyles 1985), adaptive and generative learning (Senge 1990), single-loop and double-loop and deutero-learning (Argyris and Schon 1978; 1992). Single-loop learning involves error detection and correction that allows companies to continue to



use current policies. In this way, organisations added to their knowledge base and routines without altering important structural characteristics.

Double-loop learning occurs when mistakes are detected and corrected in a way that involves immediate change, or modification, to processes (see for example Doz 1996). Deutero-learning involves reflection and analysis of previous experiences, considering when and how to change and inventing appropriate new strategies. This may require a step change where innovation is more radical. It is at this juncture that teams tackle problems in a different way, and in order to do so successfully, organisations encourage the team members to think in novel ways. It is suggested that in the IDV/ Killeen, Sun / Birkbys and also the SCA, deutero-learning was taking place.

This also raised issues as to just how far the organisations were actually prepared to encourage and allow costly implementation of change to structures and practices that would also affect individual job security.

Capabilities (Teece et al 1997; Teece 1998) are described as firm-specific competencies (Pavitt 1991) and also as core competencies (Prahalad and Hamel 1990). Aoki and Rosenberg (1987) argue that the firm's research agenda should be powerfully shaped by a motivation to exploit its accumulated stock of in-house knowledge.

The relationship between skill nurturing and value-adding is important in order to understand a firm's core competencies (Lei 1993:39). Organisations are fundamentally idiosyncratic and, over time, they accumulated unique combinations of resources and abilities that allowed competencies to develop. Firms could expect to outperform less capable organisations by accumulating and developing processes and skills into a strategy that constituted capability (Fitzpatrick 1996) and by use of resources and skills as the source of advantage. Process alignment helped the partners focus on their core capabilities.

Imai et al (1985) emphasise the importance of learning across multiple levels and across multiple functions. The existence of transaction specific knowledge and expertise and the



difficulties of skill transference, mean that it is costly for an alternative supplier to copy such knowledge (Teece 1980).

March et al (1991), describe the importance of critical incidents in shaping learning. Unlearning, or forgetting redundant or unsuccessful behaviour, is very significant for firms (Clark, Hayes and Lorenz, 1985; Huber 1991, 1996) and is an important feature in Hedberg's (1981: 3-27) analysis.

*" . . . as knowledge grows, simultaneously it becomes obsolete as realities change. Understanding therefore involves both learning anew and discarding obsolete and misleading knowledge. Discarding activity, or unlearning, is as important a part of understanding as is adding new knowledge. In fact, it seems that slow unlearning is a crucial weakness of many organisations. "*

By sharing knowledge and hopes, by confronting differences and by dealing with ambiguities people became committed to teamwork and began to understand what they had to do to succeed.

In accordance with strategy literature, forecasting the external environment and ensuring maximum utilisation of resources are fundamental to strategic planning (e.g. Grant 1995). However difficult it was to design long-term strategies, because of the speed of technological change, market conditions and the evolution of future trends, nevertheless the companies found that they had no choice other than to exploit inherent resources and tap the potential for innovation.

### **Strategic Review**

The findings of this study are supported by those in previous alliance process models (see chapter two). Strategic reviews usually involved strategy re-definition once the alliance had attained its stated goals, or when it had to respond to new contingencies, whether internal or external. Rather than simply looking at transaction cost minimisation (Zajac and



Olsen 1992:141), partners assessed the situation to see if opportunities remained to maximise value further.

Accordingly, this triggered changes in either the process of interaction or by adjustment and revision of the entire project. When the alliance was continued, *Progress* looped back to *Purpose* so that objectives and forecasts were re-specified and strategic motivations clarified, for the newly forecasted period. This is in line with the re-configuring stage in Zajac and Olsen’s (1992:142) model which emphasises the dynamic developmental nature of the exchange, where the processes themselves are subjected to change. Table 8.5, summarises characteristics in *Progress*.

Dominant Characteristics and Sub-Criteria in Progress	
CO-OPERATING CULTURES	
DEVELOPMENT OF ALLIANCE SKILLS	
	Joint tacit and explicit learning Relationship specific capabilities Collaborative management skills
JOINT INNOVATION	
	Continuous improvement Networks Value adding activities
STRATEGIC REVIEW	
	Process alignment at interface Adjustment and revision of alliance objectives

Table 8.5: Characteristics and Sub-Criteria in Progress

### 8.7 STAGE V - PARTING

The conceptual findings of this study have been borne out by a number of lifecycle scholars, for example Dwyer et al (1987) D’Aunno and Zuckerman (1987:543), Murray and Mahon (1993:109) and Spekman et al (1998). In D’Aunno and Zuckerman’s model of



organisational federations, this stage is described as the critical crossroads. Members may be motivated to withdraw because of reduced autonomy, or on the other hand, they may believe that the benefits of persistence outweigh the cost of separation and consequently incline towards merger, or common ownership, or continued alliance.

Murray and Mahon (1993) note that invariably endings are crucial and that there are three possibilities; (1) to end the specific relationship with exploration of other areas of mutual interest; (2) an amicable separation and winding up of the alliance with no immediate joint plans; (3) bitter divorce.

### **8.7.1 Strategic Withdrawal**

Strategic withdrawal has been a subject that Hirschman (1970) Harrigan (1984) and Hurst (1995) have written about. It may appear inconsistent to talk of long-term business relations and withdrawal in the same context, however both are inextricably linked. Incorporating a withdrawal clause in a partnering agreement has more positive advantages than negative connotations. It is a social governance or safeguard by which the companies can maintain strategic flexibility. That is, if they are to attain their economic objectives, the option to exit from an investment which is no longer valued, is essential.

Dwyer et al (1987:20), suggest that the possibility of withdrawal or disengagement has to be implicit throughout the whole relationship, although the actual process of dissolution is left unexplained. The authors go on to suggest that there are probably several dissolution trajectories. It is probably to risk over simplification by suggesting termination can be concentrated within a single phase.

Teece et al (1997) wrote that the principal vehicle for renewal is dynamic capability which, according to Wernerfelt (1984), is a firm's source of distinctive competence. Baum and Singh (1994) suggest, that even in turbulent times, shared values contribute to stability and a vision of strategic action is vital for organisation renewal and adaptation.



Dwyer et al (1987:19-20), state that termination of personal relationships is a significant source of psychological and physical stress and, from anecdotal evidence, suggests that dissolution of commercial relations incurs parallel tolls.

Dissolution in existing models appears to be described as conceptual in nature and this study was only able to gain limited evidence about it. Evidence suggests that *Parting* is due to a number of possibilities; lack of clear purpose and management commitment; incompatibility between objectives and rewards, turnover of personnel, lack of investment or commitment to a long term future; and other factors beyond the control of ally companies (refer to chapter 2.2, page 74).

## 8.8 SUMMARY

The empirical evidence from this study has served to explain the development of the alliances as taking place in six stages, each with identifiable characteristics. Cooperation was the means by which firms could gain new capabilities and the findings from this study provide evidence of the potential advantage in shaping inter-organisational strategies, thus learning how to manage and implement interfirm cooperation is of strategic importance.

Both transaction cost and resource-based perspectives have been considered with the objective of providing a theoretical foundation for a value creating alliance strategy (refer to chapter 1.1.9, page 13). These however, fail to capture the influence of dynamic processes that motivate alliance formation and influence its development. It is clear that no one theoretical perspective is sufficient to explain cooperative alliance development, growth and decline, although evolutionary process theory goes a long way in this regard.

Dyer and Singh (1998:670), refer to a small but growing body of literature on transaction value initiatives between alliance partners. This thesis provides empirical evidence from the case studies presented that each alliance generated such transaction value.



The study suggests that governance should not depend on a rigid hierarchy but that it should be allowed to alter as a result of social interaction (for example see Wilson and Mummalaeni 1989). Trust was an important element and created the conditions for value-generating strategies. Central to this thesis was the proposition that alliance relationships generated value through evolutionary learning.

8.9 CONCEPTUAL DEVELOPMENT

Figure 8.1 illustrates the final version of a framework to conceptualise alliance relationship development. Characteristics in each stage have been systematically distilled throughout the thesis to present an economical overview of the alliance development process (see table 8.6, page 368).

The case studies have served to refine, develop and evaluate a framework progressively extended from an initial model based on the exploratory research phase. Throughout the discussion chapters, characteristics have been further combined in accordance with the methodology described in chapter three.

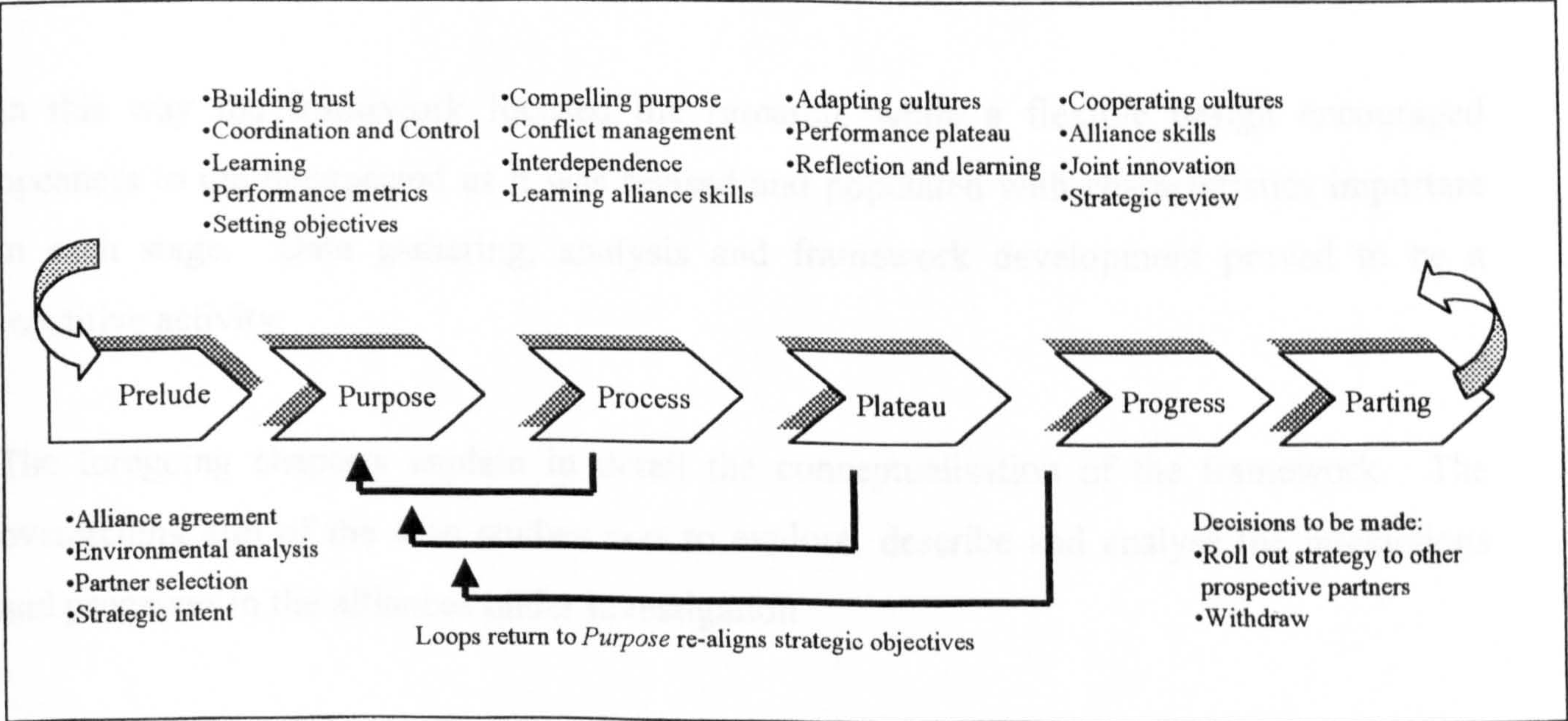


Figure 8.1 Framework of Progressive Relationship Development in Supply Chain Alliances



The conceptual framework has been advanced using a number of methodologies. In the first instance the early conceptualisation was built upon a review of supply chain alliance literature and secondary data which provided the foundation to focus the research aims and objectives (see appendices IIA, and IVA).

Data gathering, observation and interviews continued in parallel with the introduction of a second field site and in this instance, there was little historical data to inform the model. This presented the opportunity to apply an inductive approach and allow the conceptual framework to emerge empirically from field research. Finally, secondary data from the third alliance helped to test and further build the framework.

According to Miles and Huberman (1994:27) qualitative research design may be either tightly pre-structured or loose and emergent and predictably enough, most qualitative research now being done lies between these two extremes. The building of the conceptual framework for this study reflects this middle ground and the labels assigned helped guide the data gathering. Thus secondary data, on-going observation and interviews using a range of questions derived from systematic inquiry in the research sites developed and re-defined the framework.

In this way the framework focused the research, while a flexible design encouraged openness to the unexpected as it was revised and populated with characteristics important in each stage. Data gathering, analysis and framework development proved to be a repetitive activity.

The foregoing chapters explain in detail the conceptualisation of the framework. The overarching aim of the case studies was to explore, describe and analyse the interactions and processes in the alliances under investigation.

The entire research process comprised overlapping literature reviews, fieldwork, analysis and verification, and use of both inductive and deductive methods. In this way the conceptual framework was systematically built upon in the light of specific characteristics



and interconnections within and between stages. This is in accordance with Miles and Huberman's (1994:34) conclusion that the conceptual framework can be emphasised at the beginning, at the end, or both, but it is always there and often implicitly delimits settings, actors, processes and events studied.

All stages or characteristics may not as apparent in each of the alliances as the latter were at different levels of maturity and more importance may have been given to certain aspects than others. Nevertheless, the work describes how characteristics were manifested within and between stages in each alliance and how they influenced implementation and progress.

Table 8.6 summarises the main contribution of this research – “a framework for progressive development in supply chain alliances”.



ALLIANCE STAGE	CHARACTERISTICS
<b>PRELUDE</b>	<ul style="list-style-type: none"> <li>• Alliance agreement</li> <li>• Environmental analysis</li> <li>• Partner Selection</li> <li>• Strategic intent</li> </ul>
<b>PURPOSE</b>	<ul style="list-style-type: none"> <li>• Building Trust</li> <li>• Co-ordination and control mechanisms</li> <li>• Learning</li> <li>• Setting Objectives</li> </ul>
<b>PROCESS</b>	<ul style="list-style-type: none"> <li>• Compelling Purpose</li> <li>• Conflict Management</li> <li>• Interdependence</li> <li>• Learning</li> </ul>
<b>PLATEAU</b>	<ul style="list-style-type: none"> <li>• Adapting cultures</li> <li>• Performance Plateau</li> <li>• Reflection and Learning</li> </ul>
<b>PROGRESS</b>	<ul style="list-style-type: none"> <li>• Cooperating Cultures</li> <li>• Development of Alliance Skills</li> <li>• Joint Innovation</li> <li>• Strategic Review</li> </ul>
<b>PARTING</b>	<ul style="list-style-type: none"> <li>• Use Alliance gained Knowledge to Foster New Relations</li> <li>• Withdraw</li> </ul>

**Table 8.6: Framework of Progressive Relationship Development in Supply Chain Alliances**

Chapter nine presents the conclusions of this thesis in terms of implication to academic theory and management practice.



# **Chapter Nine**

## **Conclusions**



## 9.0 CONCLUSIONS

*This chapter describes factors identified by the research as being significant to strategic alliance development.*

The objectives are, to:-

- advance the discussion concerning the evolutionary development of alliances
- responds to research questions in light of the foregoing
- summarise the realities of cooperation
- outline the study's potential contribution to theory and practice
- suggest future research
- present summary conclusions

### 9.1 ALLIANCE DEVELOPMENT AS AN EVOLUTIONARY PROCESS

The notion of an evolutionary or life cycle pattern to alliance development has important implications for understanding why business alliances are formed in the first place and how they are managed. Viewing cooperation in this way highlights the importance of social interaction necessary for the inter-organisational exchange to happen. People as individuals and in teams, are the driving force behind the exchange and it is their attitudes, values, hopes and expectations which contribute to the success or failure of alliances.

This idea that alliances develop in phases seems at first glance to contradict the notion of dynamic action. In a context of a changing network of interaction, the idea of the alliance as fixed and rigid, is unlikely. Participants have to work consistently hard maintaining balance and harmony within the relationship, thereby emphasising the organic, emergent qualities of the alliance process.

From the outset, people negotiate and influence, not just in their immediate environment but within a wider stakeholder community as well. Thus, dialogue creates order in the alliance context. Agreements, regulatory action and behaviour in the exchange also reinforce the importance of systematic learning. In this way, conflict is managed



proactively as participants react to problems by concentrating on resolution of difficulties as quickly as possible.

In the alliance domain participants strive to establish strategic orientation. The search for solutions generates novel ideas which stimulate and motivate alliance participants, driving the alliance through successive stages. Regulation seems fleeting as the alliance is buffeted by internal and external events which influence the delicate social structure, forcing participants to work out new ways of achieving difficult objectives.

## **9.2 RESPONSE TO RESEARCH QUESTIONS**

The purpose of the research was to investigate the notion of phased evolutionary development in strategic alliances and to attempt to answer the following questions: -

1. How do alliances evolve over time?
2. Are progressive stages evident as the alliance matures and in what way does one stage differentiate itself from another?
3. Given that the degree of interaction, learning and innovation may alter as the alliance relationship develops, what characteristics are evident within each of the stages ?
4. Are certain characteristic more important in one phase of the evolution than in another
5. What factors identify the transition from one stage to another?
6. What factors trigger stability and instability in alliances and what happens when the alliance ends?

The research became focused when it was observed that a particular alliance seemed to have passed through different phases since its inception and that each phase had distinct characteristics (refer to chapter 3.11-3.13 pages 106-107).

At the same time a literature review revealed that understanding how relationships developed with the passage of time had been largely ignored. A few studies (conceptual and empirical) of inter-organisational exchange did explain stages in alliance development over a period of time. That is, although empirical evidence supported alliance stages and



characteristics, there was growing recognition amongst scholars that alliance development remained under researched.

Furthermore, few studies considered how an alliance advanced from one phase to another, or the conditions that might cause it to end.

Two levels of data were being gathered, at a macro level the main questions helped guide the research, while at the micro level questions asked in the interviews provided data on the day to day dynamics and factors affecting the inter-personal and inter-organisational relations.

The research questions set out, have been answered and the study does provide empirical evidence of evolutionary alliance development (see chapter 7, pages 279-330 and chapter 8, page 334).

The study describes how alliance processes and behaviour transformed over time and identifies the characteristics within each stage. Objectives were continually re-shaped and fine-tuned in response to the dynamics of the organisations' internal and external environments. Each partner entered the alliance with explicit and shared expectations at an early stage and clues were gathered to validate, challenge or redefine initial expectations. Behavioural indicators, such as reduced communication and information flow, identified transitions between the stages (refer to chapter 7.7, page 326).

Dissolution, or withdrawal, was implicit in many of the models. However, concepts were based mainly on opinion and this is an area requiring empirical investigation. Explanations of dissolution in existing models appeared conceptual in nature and the study begins to look at the background to these phenomena. Recognition of the need for strategic withdrawal was important to direct managers, when it became apparent that dissolution was probable. The study indicates that withdrawal and recovery are not exclusive options and that a middle course means painfully sorting the problem (refer chapters, 7.6.2, page 325 and 8.7, page 362).



As demonstrated by manifestations in the study, the underlying principle is that strategic and social explanations of value creation, were as important as transaction minimisation. The thesis has provided empirical evidence that an alliance relationship was a source of significant advantage and firms' boundaries were extended by creating relation-specific assets.

Such relation-specific capital was embedded in the processes and routines of a particular alliance. Organisational routines defined a regular, predictable pattern of activity, which resulted from collective learning and represented valuable, relation-specific knowledge. The cooperative process generated norms and shared beliefs within the alliance domain, lent legitimacy to the relations and formed the foundation for institutionalisation.

Knowledge transfer increased understanding and the locus for innovation and creativity was the inter-organisational team. The teams built communication conduits and, as skills improved, team members were able to recognise the value of new information obtained, to evaluate it and apply it to commercial ends. Thus, in Cohen and Leventhal's (1990) terms, they demonstrated *absorptive capacity*. Teams naturally integrated learning and innovation and provided measurement of performance. Through problem solving activities, routines changed, improved and became more efficient. They were, in this sense, truly dynamic.

Findings from the study suggest that mutual commitment by ally organisations and the teams was the key factor encouraging learning and successful project outcomes. Building an alliance culture required positively motivated people and encouraged a teamwork ethos. Continual support by senior management in terms of visible commitment provided the organisational structures in support of teamwork; namely ease of communication, strategic objectives and the time and resources required to successfully perform team tasks.

The thesis also demonstrated that alliance members began to understand where critical expertise resided in the partner organisations. Individual knowledge and skills positively influenced the joint alliance objectives as a result of identification and utilisation of resources available and by bringing these into play.



The study highlights how alliances were contextually different. For example, factors that might increase environmental turbulence included, but were not limited to, technological change, increased competition and globalisation. Accordingly, the study emphasises that alliance managers needed to apply a range of skills in order to negotiate the cooperative process although often exploratory and shifting pathways.

The empirical evidence captures the development of alliance value to provide a deeper awareness of inter-organisational strategies. Cooperation is a means by which firms can learn new capabilities. Therefore developing an understanding of the evolutionary path of interfirm cooperation is of strategic importance. Viewing alliances in this way, emphasises the cognitive and creative character of relations.

Within the alliance, networks generated social capital, improved and facilitated coordination and reduced uncertainty and bounded rationality. A central proposition of the thesis is that alliance relationships generated value through evolutionary learning. Notwithstanding such improvements, coordination required frequent negotiation which was time consuming and costly.

The study indicates that governance should not only be based on structural explanations but that it will also alter as a result of social interaction (for example see Wilson and Mummalaeni 1989). Trust, as the dominant form of control, created the incentives for value-generating strategies. The demonstration of trust, through reciprocity had the power to generate a sense of responsibility and commitment. Coordination and control was imposed with reference to joint performance indicators. These identified continuous improvements that transcended organisational boundaries.

Levels of trust were directly related to the close interaction between partners. Paradoxically, personal trust between allies overcame initially incompatible cultures. Organisational trust was manifested by openness which created the conditions to sustain shared norms and values. As interaction increased, good personal relations resulted in a sense of shared confidence.



Focusing on the social processes, it became clear that the participants had to consciously strive to maintain a balance between internal and external influences. That is, the alliance process involved the partners in jointly designing strategies to cope with conflicting influences from each organisation and its external environment. However, the catalyst for alliancing had to be preserved. As market conditions improved, motivation at board level in support of the initiative appeared to diminish.

Evidence from this study suggested that collaborating firms needed to manage complex inter-relations simultaneously in different environments, for example internal, inter-organisation and industrial. Inter-organisational teams and networks of personal relations was the foundation to build social capital as an organisational competence. Such relations sometimes even went beyond organisational structures and commercial bonds so that people became firm friends. The research has described the changing dynamics of the alliance relations with the passage of time. Overall, there was a fundamental change in the way people behaved while conducting business.

Findings suggested that knowing how to manage alliances was not widespread and clusters of individuals promoted the concept within their own domain. Transfer tended to be by chance rather than via planned training or education. Indications were that managers, who had worked in networks before, were more likely to understand alliance logic. Managers who had improved efficiency through collaboration appeared more inclined to promote new alliances as compared with those who saw adverse economic conditions as a reason or possibly as an excuse, to revert to adversarial control.

The study showed that inter-organisational teams were the means by which skills of separate organisations combined to develop new strategically significant capabilities. Pressure on internal structure and culture, forced the companies to break down barriers and cut administrative layers to become more flexible and team-reliant. Teams underperformed when objectives were unclear or could not be translated into tasks.



Alliance teamwork depended on trust between management and workers and on overcoming organisational boundaries between customers and suppliers. It was therefore the antithesis of traditional adversarialism. The empirical evidence garnered demonstrated that through inter-organisational teamwork, idiosyncratic tacit knowledge and alliance specific know-how was generated. In this sense, the inter-organisational teams were instruments of strategic change.

The alliance members relied, in part, upon knowledge that individuals had and could fully exploit. Yet their capability also depended on qualities that could only be described, in somewhat clichéd terms such as good judgement, leadership or intellectual ability.

At the outset of the action, little consideration was given to knowledge generation because the parties did not understand the extent, or implications, of such joint knowledge transference and development. Indeed, only in instances when Intellectual Property was exploited was the issue of ownership and opportunism even thought about. Conflict between corporate expediency and personal interest had to be resolved and valuable knowledge protected. Collaborating parties in the alliances did not seem to consider how to prevent allies from profiting opportunistically from joint learning or how to safeguard core competencies.

Ownership of knowledge was therefore an area of concern and it was unclear how expertise could be transformed into an asset with a book value. It was even more important to know how that asset was to be protected. Alliancing firms had to be able to protect their core skills. In apparent contradiction, alliances encouraged the flow of knowledge across boundaries so that managers had to exploit it as quickly as possible, rather than dwelling on how to protect the asset.

### **9.3 THE REALITIES OF COOPERATION**

Findings from this study testify to the fact that alliances are difficult to manage, and allies can be abrasive, antagonistic and prone to conflict. In the first instance, and crucial to the outcome is how far up the organisational hierarchy the mandate for the alliance goes.



Major organisational change needs to be declared in the organisation's strategy, to ensure unreserved commitment to the project. In reality this might not be the case and alliances may be initiated by senior managers who are personally driven to lead the project.

A question to be considered may be whether "*strategic alliances*" are really "*strategic*"? Findings from this study indicate that each alliance began with a close customer / supplier association and concentrated on operational processes at the interface between the companies.

It is proposed that alliances may be considered either intermediate or long-term. In an intermediate alliance objectives are mainly operational in nature and a long-term alliance is one in which objectives may become strategic. Thus partnering or customer/supplier relations would fall into the description of an intermediate alliance, as it is functionally oriented and enables partners to increase interaction, share information, and integrate processes.

A strategic alliance on the other hand has greater implications for the corporation in terms of changing the work philosophy and organisational culture. As relations matured, once initial operational objectives were attained, participants were then able to bring their minds to bear on problems of a more strategic nature that would involve the wider organisation. Thus, it may be postulated that the alliance not only passed through horizontal process stages but also vertical levels; from operational, through tactical to strategic.

Awareness of levels of development in alliances may be important in terms of the expected duration and perceived success rate. Indeed, intermediate alliances might be considered a first step in the change process, allowing the participants to learn how to manage the alliance before considering more challenging strategic problems.

At the outset, partners failed to anticipate the potential of the alliance and how it would grow. Findings suggested that at the start of an alliance, neither party had any idea of the scope for joint development. Learning was a major outcome of the alliances and testified to



the evolutionary growth. This only became clear as the alliance developed. Learning how to manage cooperative relations was invaluable and enabled companies to improve efficiency and develop much needed collaborative skills. The ultimate aim was not just to gain a reputation for being a good partner but to begin to manage a portfolio of cooperative relations at any one time, some more strategically important than others.

Team learning was fundamental to building cooperative relations and the significant outcome of this teamwork was diffusion of knowledge, innovation and the capacity to bring about change. Successful teams supported by committed managers, were imbued with a common purpose and understood the objectives, were able to muster resources to carry out the task and were empowered with the authority to make decisions. Conversely, unsuccessful teams did not have any one, or all, of the above criteria.

Appreciating the impact of the alliance can be a particular problem for some participants as the changes are likely to affect their expectations, behaviour and work load. Competition is fundamental to the human psyche and the motivation underpinning alliances in this study was to improve competitiveness. Tension in the individual organisations between those who supported cooperation as against proponents of competition, created difficulties. Ignorance regarding the objectives of the alliance and why cooperation was deemed a more appropriate strategy than traditional competitive tendering exacerbated the situation. Inadequate communication led to misinterpretation, misperception and low trust. Complexity and information asymmetry went hand in hand with poor feedback to create these conditions.

Even managers who had actively promoted cooperative working appeared to misunderstand the degree to which each organisations had to change. Trust based upon reciprocity helped customers and suppliers modify behaviour. Perceived loss of corporate identity was a significant issue, partly due to an inability to visualise the alliance's structure and boundaries. To minimise conflict, partners had to be clear about the scope of the alliance and needed unambiguous terms of reference.



The alliances were established in response to market pressure following pragmatic decisions by customers with cost saving and production efficiency firmly in mind. In all cases the customer was more powerful than the suppliers. However, it did not follow that he exerted overwhelming control. As the alliances matured and interdependence increased, the balance of power tended to adjust.

Each firm involved in the cooperative exchange was influenced by its own particular circumstances. It was very difficult for the alliances to be kept on track and to maintain momentum when the firm's internal environment was turbulent. Individuals taken off the project meant that the focus of direction changed. Similarly, when external negative factors impacted on the firm, interest in the alliance waned.

This study suggests that some industries appear to be more adversarial than others. It also shows how divergent organisational interests can be shaped into collective action. A well structured and managed process is required to assist alliances through such difficulties.

Resistance to change is a predictable human response to situations or circumstances involving uncertainty and novelty. In general, and to varying degrees throughout the alliances, obstacles to successful cooperative relations can be said to be due to one of the following factors:- cultural and institutional, environmental, historical, ideological, political, social and technical.

#### **9.4 CONTRIBUTION TO MANAGEMENT THEORY**

This study's main contribution to theory is advancement of the notion of alliance development in phases.

The concept of fixed transactions under-represents the dynamics and uncertain character of inter-organisational relationships. Studying the process of cooperation goes some way to contribute to a process-oriented theory of inter-organisational relations. The empirical findings of this study advance the proposition that cooperation by business alliances is one means by which businesses are likely to get better.



Fragmentation in literature has contributed to lack of acknowledgment of an emergent inter-organisational process and life cycle theory. There has been an overemphasis on structural features in the building of alliances and a dearth of empirical studies concerning their strategic development. One reason may be that such studies have to span over a long period of time in order to determine significant patterns.

Several inter-organisational process models are examined in this work; each emphasising different factors to explain the changing characteristics of exchange relationships over a period of time.

Table 9.1 illustrates the conceptual framework derived from this research and matches a number of inter-organisational process models against it. It should be apparent that there is considerable diversity in the models and that the framework derived from this study appears more comprehensive than others to date. In this sense, the thesis addresses the gap.



PRELUDE	PURPOSE	PROCESS	PLATEAU	PROGRESS	PARTING
<ul style="list-style-type: none"> <li>• Alliance Agreement</li> <li>• Environmental Analysis</li> <li>• Partner Selection</li> <li>• Strategic Intent</li> </ul>	<ul style="list-style-type: none"> <li>• Building Trust</li> <li>• Coordination and Control</li> <li>• Learning</li> <li>• Performance Metrics</li> <li>• Setting Objectives</li> </ul>	<ul style="list-style-type: none"> <li>• Compelling Purpose</li> <li>• Conflict Management</li> <li>• Interdependence</li> <li>• Learning and Alliance Skills</li> </ul>	<ul style="list-style-type: none"> <li>• Adapting Cultures</li> <li>• Performance Plateau</li> <li>• Reflection and Learning</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperating Cultures</li> <li>• Alliance Skills</li> <li>• Joint Innovation</li> <li>• Strategic Review</li> </ul>	<ul style="list-style-type: none"> <li>• Use Alliance Gained Knowledge to Foster New Relations</li> <li>• Withdraw</li> </ul>
<b>Wilson (1975): Decision Process Model of Organisational Buying – Conceptual</b>					
1. Legitimisation 2. Information exchange 3. Attribute delineation 4. Attribute value negotiation				5. Post sale analysis	
<b>Ford (1980) The Development of Buyer-Seller Relationships in Industrial Markets – Conceptual</b>					
1. Pre-relationship <ul style="list-style-type: none"> <li>• Supplier Evaluation</li> </ul> 2. Early stage <ul style="list-style-type: none"> <li>• Negotiation</li> </ul>	3. Development stage <ul style="list-style-type: none"> <li>• Contract signed</li> </ul>	4. Long-term stage	5. Final stage <ul style="list-style-type: none"> <li>• Long-term established stable markets</li> <li>• Institutionalisation</li> <li>• Industry Codes of Practice</li> </ul>		



PRELUDE	PURPOSE	PROCESS	PLATEAU	PROGRESS	PARTING
<b>D'Aunno and Zuckerman, (1987): A Life Cycle Model of Organisational Federations – Empirical</b>					
<b>1. Emergence</b> <ul style="list-style-type: none"> <li>• Environmental threat and uncertainty about valued resources</li> <li>• Shared ideologies and similar dependencies</li> <li>• Define purpose</li> <li>• Develop membership criteria</li> </ul>	<b>2. Transition</b> <ul style="list-style-type: none"> <li>• Motivation to achieve purpose</li> <li>• Increased dependency</li> <li>• Form Management group</li> <li>• Mechanisms for coordination and control</li> </ul>		<b>3. Maturity</b> <ul style="list-style-type: none"> <li>• Willingness to put federation business first</li> <li>• Benefits from previous investment</li> <li>• Attain stated goals</li> <li>• Sustain commitment</li> </ul>	<b>5. Critical Cross Roads</b> <ul style="list-style-type: none"> <li>• Manage decisions about future</li> </ul>	
<b>Dwyer, Schurr and Oh, (1987): Relationship Development Process – Conceptual</b>					
<b>1. Awareness</b> <ul style="list-style-type: none"> <li>• Partner selection</li> <li>• Proximity</li> </ul> <b>2. Exploration</b> <ul style="list-style-type: none"> <li>• Attraction</li> <li>• Communication</li> <li>• Bargaining</li> <li>• Development and exercise of power</li> <li>• Norm development</li> <li>• Expectation</li> </ul>	<b>3. Expansion</b> <ul style="list-style-type: none"> <li>• Processes introduced in Exploration continue to operate</li> <li>• Rudimentary trust</li> <li>• Joint satisfaction</li> <li>• Increased dependence</li> </ul>			<b>4. Commitment</b> <ul style="list-style-type: none"> <li>• Implicit or explicit pledge of continuity</li> <li>• Frequent testing</li> <li>• Measurable criteria of commitment</li> </ul>	<b>5. Dissolution</b> <ul style="list-style-type: none"> <li>• Implicit throughout relationship</li> </ul>



PRELUDE	PURPOSE	PROCESS	PLATEAU	PROGRESS	PARTING
<b>Frazier, Spekman &amp; O'Neal, (1988): Just-in-Time Exchange Relationships in Industrial Markets - Conceptual</b>					
<b>1. Interest</b> Influenced by: <ul style="list-style-type: none"> <li>• Uncertainty</li> <li>• Market position</li> <li>• Part material characteristics</li> </ul>				<b>4. Review</b> <ul style="list-style-type: none"> <li>• Comparison of present and past experience</li> <li>• Joint appraisal</li> <li>• Equity judgments</li> </ul>	
<b>2. Initiation - Rejection</b> <ul style="list-style-type: none"> <li>• Search and evaluations</li> <li>• Partner availability</li> <li>• Financial resources</li> </ul>					
<b>3. Implementation</b> <ul style="list-style-type: none"> <li>• Exchange agreement</li> <li>• Expectations</li> <li>• Internal sociopolitical structure</li> </ul>					
<b>Gray, (1998): Collaboration Model in Business Alliances - Empirical</b>					
<b>1 Getting started</b> <ul style="list-style-type: none"> <li>• Background analysis</li> <li>• Prior relations Evaluation conditions faced by the firm</li> </ul>	<b>2 Negotiation</b> <ul style="list-style-type: none"> <li>• Resources contribution</li> <li>• Protect IPR</li> <li>• Structure</li> <li>• Task and resource allocation</li> </ul>			<b>3 Implementation / revision</b> <ul style="list-style-type: none"> <li>• Adaptation and revision</li> <li>• Identify favourable and unfavourable events</li> <li>• Fine-tuning</li> </ul>	



PRELUDE	PURPOSE	PROCESS	PLATEAU	PROGRESS	PARTING
<b>Larson, (1992): A Process Model for the Formation of Entrepreneurial Dyads - Empirical</b>					
<b>1. Pre-conditions for exchange</b> <ul style="list-style-type: none"> <li>• History</li> <li>• Personal reputation</li> <li>• Firm reputation</li> </ul>	<b>2. Conditions to build</b> <ul style="list-style-type: none"> <li>• Mutual economic advantage</li> <li>• Trial period</li> <li>• Engagement</li> <li>• Rules and procedures</li> <li>• Clear expectations</li> <li>• Reciprocity</li> <li>• Trust</li> </ul>			<b>3. Integration and control</b> <ul style="list-style-type: none"> <li>• Operational integration</li> <li>• Strategic integration</li> <li>• Social control</li> </ul>	
<b>Murray and Mahon, (1993): Strategic Alliance Life Cycle - Empirical</b>					
<b>1. Courtship</b> <ul style="list-style-type: none"> <li>• Partner selection</li> <li>• Initial contacts</li> <li>• Negotiation position</li> <li>• Cost / benefit</li> </ul> <b>3. Negotiation</b> <ul style="list-style-type: none"> <li>• Contractual agreement</li> </ul>				<b>4. Maintenance</b> <ul style="list-style-type: none"> <li>• Operating and reporting routines</li> </ul>	<b>5. Endings</b> <ul style="list-style-type: none"> <li>• End of specific relationship with extensions into other mutual interests</li> <li>• Amicable separation</li> <li>• Hostile divorce</li> </ul>



PRELUDE	PURPOSE	PROCESS	PLATEAU	PROGRESS	PARTING
<b>Zajac and Olsen, (1993) Transactional Value Model - Conceptual</b>					
	<b>1. Initialising</b> <ul style="list-style-type: none"> <li>• Weighing alternatives</li> <li>• Clarifying parameters</li> <li>• Preliminary exchange and communication</li> <li>• Initial exchange rounds</li> </ul>	<b>2. Processing</b> <ul style="list-style-type: none"> <li>• Accelerating learning</li> <li>• Managing conflict</li> <li>• Creating relational norms</li> <li>• Developing trust</li> </ul>		<b>4. Reconfiguring</b> <ul style="list-style-type: none"> <li>• End of expected duration</li> <li>• Assess performance gap</li> <li>• Redefine strategy</li> <li>• Redefine nature of exchange process</li> </ul>	
<b>Ring and Van de Ven, (1994): Developmental Process of Co-operative Inter-organisational Relationships- Empirical</b>					
<b>1. Negotiation</b> <ul style="list-style-type: none"> <li>• Joint expectations of risk and trust</li> <li>• Formal bargaining</li> </ul> informal sense making	<b>2. Commitment</b> <ul style="list-style-type: none"> <li>• Formal legal contract</li> <li>• Psychological contract</li> </ul> <b>3. Execution</b> <ul style="list-style-type: none"> <li>• Role interaction</li> <li>• Personal interaction</li> </ul>				
<b>Doz, (1996): the Evolution of Co-operation in Strategic Alliances - Empirical</b>					
	<b>1. Initial Conditions</b> <ul style="list-style-type: none"> <li>• Task definition</li> <li>• Partners organisational routines</li> <li>• Expectations</li> <li>• Interface structure</li> </ul>	<b>2. Learning</b> <ul style="list-style-type: none"> <li>• Defined through five dimensions <ul style="list-style-type: none"> <li>Environment</li> <li>Task</li> <li>Process</li> <li>Skills</li> <li>Goals</li> </ul> </li> </ul>		<b>3. Re-evaluation</b> <ul style="list-style-type: none"> <li>• Readjustment to initial conditions</li> <li>• Iterative cycles of learning typified by greater trust, flexibility and commitment</li> </ul>	



PRELUDE	PURPOSE	PROCESS	PLATEAU	PROGRESS	PARTING
<b>Schmitz, Frankel &amp; Frayer (1995): ECR Alliances : Best Practice Model - Empirical</b>					
<b>1. Conceptualisation</b> <ul style="list-style-type: none"> <li>Internal motivation</li> </ul> <b>2. Pursuance</b> <ul style="list-style-type: none"> <li>Partner selection</li> </ul> <b>3. Configuration</b> <ul style="list-style-type: none"> <li>Partner agreement</li> </ul>	<b>4. Configuration</b> <ul style="list-style-type: none"> <li>Partner agreement</li> </ul> <b>5. Implementation and Continuity</b> <ul style="list-style-type: none"> <li>Feedback mechanism to asses and sustain performance</li> </ul>				
<b>Speckman, Forbeshm, Isabella and MacAvon, (1998): a Life Cycle Approach To Strategic Alliances</b>					
<b>1. Anticipation</b> <ul style="list-style-type: none"> <li>Pre-alliance competitive needs</li> <li>Partner search</li> </ul> <b>2. Engagement</b> <ul style="list-style-type: none"> <li>Partner identification</li> </ul> <b>3. Valuation</b> <ul style="list-style-type: none"> <li>Business case analysis</li> <li>Internal selling</li> </ul>	<b>4. Co-ordination</b> <ul style="list-style-type: none"> <li>Operational focus</li> <li>Task orientation</li> <li>Division of labour</li> <li>Coordinating interfaces</li> </ul> <b>5. Investment</b> <ul style="list-style-type: none"> <li>Committing</li> <li>Resource allocation</li> <li>Broadening scope</li> </ul>			<b>6. Stabilization</b> <ul style="list-style-type: none"> <li>High interdependence</li> <li>Assessment of worth and contribution</li> <li>Adjustment</li> </ul>	<b>7. Decision</b> <ul style="list-style-type: none"> <li>Where now</li> </ul>



## 9.5 CONTRIBUTION TO MANAGEMENT PRACTICE

In the first instance business alliances have to be seen as central to the strategy of the firm. If this is not clearly understood, then allies cannot take the decisions necessary for development of the alliance and consequently, efforts will either break down, or be lost in "*no man's land*".

An understanding of alliance development may be a useful tool in change management, in the context of customer and supplier relations. Windows of opportunity, suggested in the study, enabled managers to regularly review issues that created concern and to deal with potential conflict and misconceptions before they became critical to the alliance's survival. At the same time, the participative nature of the decision making process involved multiple actors, and was, in itself, a factor reducing resistance to organisational change.

This theme served as a guide during the implementation process given that managers, more often than not, had to manage conditions of disequilibrium or, in Schumpeterian (1934) terms, "*creative destruction*". This generated two scenarios; one within relatively stable industries and the second, in turbulent industries.

In the former, behavioural guidelines apparent during the study, gave managers confidence to create crisis, so as to wrench the companies from static routines and before individuals lapsed into "*old*", pre-alliance, behaviour.

In the situation where organisations were in a constant state of disequilibrium or creativity, the notion of a process, or life cycle, presents a structure to assist the companies to fulfill strategic objectives by understanding the discipline of the flow, setting the rhythm of the cycle, and finally honing or fine tuning.

Above all, the notion of incremental development can be useful in understanding, predicting and influencing the growth and development of business alliances.



Managers who better understand how to formulate and manage business alliances, can hope to implement successful alliances and gain reputations as being good partners. Awareness of behavioural indicators can serve to navigate managers through periods of crisis. Recognition of transition points between the stages allows identification of factors that slow down the process and the means for timely intervention to address and correct them, achieving objectives more quickly.

Recognition of the need for strategic withdrawal, is also important to provide direction to managers when the need for withdrawal becomes apparent. This study points to evidence that withdrawal and recovery were not exclusive options. Even faint grumbling, or silent protest, can come to management's attention and alert it to the existence of a problem. That is, the process of decline activated counter forces and the presence of trust made exit less likely and provided a greater chance of recovery. Trust prevented deterioration becoming irreversible and allowed prompt action to be taken to resolve concerns identified.

As is the case in any alliance, success was heavily dependent on building personal relationships and these were promoted by breaking down barriers to communication. Improvement was always possible and ideas could come from anyone. The social process of teamwork itself, involving interaction between people normally engaged in distinctly different activities, encouraged innovation. Betterment also demanded persistent and comprehensive re-examination of productive practices. Truly effective teamwork nurtured collective commitment to solve complicated problems. Equally significant achievements included the diffusion of knowledge, innovation and the ability to institute and sustain change.

## **9.6 CONTRIBUTION TO MANAGEMENT POLICY**

This research has identified the need for education and continuous personal development at an individual level. It has raised awareness that new and different skills are necessary to manage alliances. It is no longer sufficient for senior personnel to be specialists with



expertise in one area; they must also have a broad understanding of all aspects of a business in order to successfully negotiate for scarce resources and influence development.

This reinforces the requirement that managers should be of the highest intellectual ability, able to manage diverse cultures and the politics that inevitably result from tensions in the collaborating environment. Alliancing is about managing change and managers who learn alliance skills may be better able to steer the organisation through the inevitable peaks and troughs. Managers had to learn to think strategically and to manage creatively, by absorbing ideas, spotting opportunities and responding to new situations.

The study has implications at two levels in the organisations; strategic, in terms of corporate strategy and knowledge management, and operational, in terms of training and development. At a strategic level, understanding of the evolutionary development in alliances means that requirements are better able to be factored into the corporate strategy of the organisations. The implications are that companies wishing to embark on an alliance strategy have a clearer insight into the likely events and requirements at various stages of development.

This study emphasises the amount of learning that took place during the alliance process. This had implications in terms of supporting corporate wide knowledge management programmes as well as training, in terms of developing team skills at an operational level. The optimistic outcome was a community of practitioners who were flexible, motivated and prepared for change. Organisations, best prepared to face uncertainty in the future, were those that built social capital as a competence.

Learning was recognised as being fundamentally important in the struggle to achieve and maintain competitiveness. Knowledge generation enabled the organisations to renew and to expand boundaries. Speed of knowledge exploitation was crucial to gain this innovative edge. Forming collaborative relationships with customers and suppliers was an ideal environment for the transference of knowledge. This was particularly relevant in the case of



tacit knowledge held by employees in the partner organisations and in the technologies the firms possessed.

Collaboration helped firms to learn from each other and this accelerated the movement of knowledge. Although tacit knowledge was difficult to transfer, nevertheless, collaboration encouraged effective use of partnering specific, tacit knowledge to develop joint processes, procedures and techniques.

If two organisations wanted to create new capabilities by combining individual knowledge and skills in a unique way, they first had to allow personnel to work closely together, to develop core competencies and simultaneously acquire new skills. At the same time, they needed to recognise that teamwork was not a simple mechanical device for creating winning solutions.

As well as this study, there is growing agreement amongst researchers (see for example Barney 1991), backed by solid evidence, that collective knowledge is strategically powerful. In fact many theorists go as far to say that organisational knowledge is the only way to sustain competitive advantage (see for example Levitt and March 1988; Ciborro 1991; Huber 1996).

Cross-functional success relied on a team structure that encouraged individuals to work as an ensemble. Team behaviour could be judged by examination of assets such as leadership, problem solving and interpersonal skills.

It was difficult for companies to plan for the long-term and this thesis provides evidence that inter-organisational team projects may assist in strategy redefinition. Through a continuous business improvement programme, objectives were continually adjusted as the internal or external circumstance dictated. Projects demanded knowledge of the competitive environment and individuals or teams were constantly searching for information outwith the firm's boundaries to update knowledge of competitor activity.



Increased industry awareness provided the teams with more information on which to base decisions and ensured that strategy remained flexible and dynamic.

Crucial to positive performance was the teams' ability to communicate orally and in writing, within the group and with others, and to anticipate the reaction the information was likely to receive. Closely associated with the foregoing, was the quality of the decisions themselves. This depended on consultation and positive exchanges within and across departmental, divisional and corporate boundaries. Leadership was often considered the single most important factor in team success and when leadership was shared, team capability, understanding and dynamics were enhanced.

When solving complex, non-routine problems, multi-disciplinary teams with diverse skills and perspectives proved to be invaluable resources. However, people with such a variety of backgrounds often generated conflict and this had to be recognised for what it really was. Resolving such conflict promoted problem-solving skills and discovery of superior solutions.

Senior management would do well to understand the strategic significance of inter-organisational teams. Their contribution to competitive advantage in the market and their ability to create knowledge was limited only by the capabilities of the individuals within the team and the success of company managers in providing the commitment, resources and empowerment necessary for the teams to achieve the companies' objectives.

Finally, this thesis has the potential to contribute to the economic environment, in terms of infrastructure support. Local government is responding to central government initiatives that advocate industry sharing and cooperation. The findings of this thesis may assist organisations attempting to implement alliances.

Small and Medium Sized enterprises (SME's) are often overlooked in the mainstream of organisational development, despite the fact that they face similar challenges and confront change in the same way as large firms. Given the evidence that communities of business



associations are generated through collaborative processes, SME's can and should be provided with guidelines and their awareness raised regarding the benefits of cooperative working.

## 9.7 AGENDA FOR FUTURE RESEARCH

Areas for potential future research exist which expand on the thesis findings.

This research has concentrated on observation of an evolutionary development of three alliances, each lasting for three years or more. It provides an opportunity to continue to study these alliances as they continue to grow and change. It has identified the relationship between dyad supply chain relations and collaborative networks. It raises the question whether the conceptual framework can be used to better understand cooperation in terms of different types of alliances, in different industries.

A long-term study providing objective measures of achievements, in terms of precise economics, would add to credibility. Although profit is only one measure of success, this examination has the basis to assess other measures, for example learning or commitment.

Research into the duration of alliances would be instructive, given that not all alliances are designed to be long-term. *How do transitory alliances differ from long-term? Are there different dynamics? Do short-term alliances require different management skills? Do short-term alliances encourage network formation and how important is the ability to manage a portfolio of relations?*

Conclusions regarding alliance creation have been based on evidence taken at single points in time (Spekman et al 1998), and rarely has a study followed an alliance through its whole life cycle. Because alliances evolve over time, internal and external conditions, alliance objectives and expectations change and are likely to differ from the original concept.



A process framework offers an opportunity to shape research as motives, environmental circumstances and partners' objectives adjust. Changing strategic demands and environmental conditions sometimes necessitate considerable effort and that it is often difficult to sustain. To overcome these difficulties, alliances should be reviewed at various points in the process.

Certain characteristics may be more important in some alliances than in others. Therefore, studies using different theoretical perspectives may highlight new variables. For example, integration of the psychology of personal relations, cognitive theory and teamwork, could provide richer frames of reference.

Further research is required to understand facets of influence, such as the dynamics of power within the stages, coping with power and politics, problem solving and mechanisms for conflict resolution. This would hope to capture the essential role of leaders in alliance management, their individual and organisational philosophies, trust and how all such factors influence the governance structures within, and between, the organisations.

The alliances involved a web of multi-firm relationships, reflecting complex interaction. Inquiry into the development of such networks would be beneficial to our understanding of alliance development practices.

Some scholars suggest that the trauma of crisis is an inherent part of change and that it provides opportunities for learning and change (Pauchant and Mitroff 1992). This study suggests that, although dissolution is implicit in each stage of the cycle, there is greater pressure on players to adjust rather than to exit.

Exchange theories have already provided powerful tools for the analysis of business alliances. Significantly, the factors contributing to alliance dissolution seem to have been neglected. Disengagement appears to be a poorly understood aspect of the strategic alliance process.



## 9.8 SUMMARY

Attempts to conceptualise alliances, passing through particular stages on the road to maturity, capture the imperfect, dynamic and developmental nature of interorganisational relations. The following details taken from this study emphasise the complexity of the subject. Alliances are :-

- inherently perplexing and difficult to manage
- involve collective strategies to create ownership and satisfaction
- empower individuals by increasing the scope and job responsibility
- assist organisations to cope with environmental pressures
- stimulating
- tools for managing change
- agents to institutionalise dynamic improvements
- vehicles for strategic change through learning and innovation
- able to create relationship norms and change attitudes and behaviour
- a particular organisational design, focusing on teamwork

This study has suggested the emergence of a pattern to alliance development and has advanced understanding of strategic alliances, by providing a more thorough framework for the development of a business alliance. In order to comprehend and deal with business alliances in a dynamic environment, the study considered inter-organisational alliances as a developmental process. Examining alliances this way, rather than looking at them “before and after”, should enable companies to react and adapt to change more readily.

It has to be borne in mind, that confusion is not too strong a description of the circumstances at the inception of an alliance. Chaos, in varying degrees, was a prerequisite of innovative activity and order often arose out of conflict to reveal the path to better performance. Leadership champions, with charisma and drive, emerged to encourage open communication and shared vision.



By structuring the change process, management attested its ability and emphasised learning in order to catalyse further action. To be successful, a firm had to have coherent strategies and a mode of governance that built on core capabilities essential for implementing effective tactics.

This framework was not meant to be prescriptive because alliance building requires continuous adaptation to changing circumstances. It highlighted a partial “to do” or “expectation” list, and completion depended on the contextual factors of each alliance. As the relationship developed, it was noted that some circumstances applied in one stage and apparently not at all in others.

The formative months of the fragile alliances demanded constant nurturing and attention. A setback very quickly saw a return to all too familiar customer-supplier relations. At the same time the level of trust could fall to below that at the outset and confidence to challenge the working practices of the partner company, vanished. Behaviour and individual body language were often far from constructive and hints of adversarialism, preconceptions of agenda setting and lack of cost transparency easily undermined positive signals. Such lack of openness and mistrust was resolved in large measure through joint problem solving and dialogue. Many factors contributed to such periods of turmoil, which seemed to be implicit at all stages. At these times, commitment to continuous improvement of company goals and business values was the guiding light.

Resistance to change was inevitable, as jobs and individual power bases were often under threat. It was therefore critical that all stakeholders were involved in the change programme. Blame culture thrived in organisations undergoing change. The “*them and us*” attitude usually presaged a return to traditional management. Alliances flourished within cooperative cultures, if supported by an appropriate management philosophy.

Despite the essentials, namely senior and line management support and commitment, to be convincing each alliance had to demonstrate quick, tangible and numerical proof that it was working. Convincing sceptics therefore demanded visible success, in conjunction with



rigorous performance and cost control benchmarks. Economies of scale would not be realised unless the alliance was able to integrate resource planning across the companies.

Success, as defined by continuity, has been demonstrated by cost savings and improved efficiency. Evidence, so far, suggests that when managers understand what is required of them to manage the alliance, they are more likely to do so successfully and more quickly.

Conflicting goals seriously undermined the alliances and it was necessary to identify the operating boundaries within which the alliance worked and the impact on corporate value streams in terms of cost and benefit. This meant proffering incentives and inculcating both the alliance partners and company staff with the same goals. It did not mean budget orientation, as this sent confusing signals as regards cost cutting, instead of creating value and improvement. Business alliances were difficult and some had more than their fair share of conflict. Managers adopting the alliance route had to anticipate antagonistic situations that required thinking and managing in new ways. This called for management skills to foster a collaborative philosophy.

Taking account of the foregoing summary, a relationship development framework may be a useful navigational tool, to guide companies involved in business alliances through uncharted waters, to reach their objectives more quickly. Evidence from this study indicates that there is a rhythm to such relationships and, once this is recognised, that one should respect the flow, intervening to remove obstacles to progress before the dynamic momentum is lost.



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## **Appendices**



APPENDIX I FIELD NOTE SUMMARY FORM

Project Title	SCA ref:008
Subject	Woodbank SCA conference
Researcher	BW
Date	7.11.98

Contact	Steve Taylor	Job title:	SLM
Company	Shell		
Venue	Woodbank	Duration	Date: 29.10.98
Purpose	Setting the Scene		

1.
- MAIN THEMES; IMPRESSIONS; SUMMARY STATEMENT**

Over view by Steve Taylor- Shell Perspective

First 10 months will be summarised in terms of success, failures, issues and future.

Success: Achieving £1.3M savings. This is what the SCA is all about.

  - Captured the Enterprise business
  - Altens is far busier, and getting full
  - More recent efforts with the “pause plan”
  - Getting all Seaforth’s business into Altens as well as the office
  - Continued improvement in transport efficiency

Failures

  - KPI’s at outset were not right. They were not easily measured or well defined.
  - Incentives were not driving everyone and not well aligned.
  - Profit and alliance working methodology was not understood by all
  - lot more work to be done
  - MMH
  - tendency to work in silos

Issues.

  - Lease when Seaforth moved out of Nord centre
  - Contractual clauses
  - Staffing, affected Seaforth, now have the manpower
  - SAP. Major change internally. Would not have started if they had realised the disruption this would create. It has been significant in terms of staff dilemma and uncertainty.
  - Shell OCTG issue with Altens.

Future

  - Lower price
  - Ultimate benefit to Shell is to reduce our costs.
  - Free open communication and trust
  - teamworking, attacking and delivering some of the projects



- Shaping up the incentives. Get the KPI's right. Use current systems so that there is no extra work.

last 14 months have been peaks and troughs.

- Simple concept but difficult to make happen
- too much political and posturing
- different goals, objectives and agendas
- didn't understand
- lacked direction
- lacked trust

Now come through a muddy patch.- Pause Plan - drew breath. Moving too fast in the beginning. This slowed everything down. Despite the complaining it has worked with improvements in every facility.

KPI's, note well set, yet even so still managed to get there.

#### ARRC

- less blinkered
- Think differently about the business
- Deal differently with the customers
- Talk - work with you- do it differently
- changed how they worked.

Very difficult to keep the business charging on worth limited resources- getting there.

Positive area of business growth.

Sceptical at the outset, but kept it going

Welcome challenge and more empowerment

lot of work, dramatic and traumatic.

ASCo market leaders with sever internal problems.

John Inness vision proved correct in hindsight.

Complete new methodology.

Both contractors will benefit from open book.

#### SEAFORTH

- SCA linchpin to Seaforth's future.
- Radically changed the way they do business
- become more competitive
- using top class facilities
- partners are market leaders
- generates wealth
- core clients managed through Shell resources
- major redeployment problem
- slowly becoming trusted
- Move from Nord centre
- IT infrastructure
- New management team
- AOB "Full"
- win new business
- Clients looking for 10 year deal based on progress
- Halliburton now on board
- transfer of methodologies



	<ul style="list-style-type: none"><li>• earlier turmoil is changing</li><li>• SCA works.</li><li>• Sharing among all clients. Clarifying everything. How the SCA will work in next year</li><li>• How it will be managed in the next year</li><li>• workforce tradition to be overcome</li></ul> <p>Future</p> <ul style="list-style-type: none"><li>• One big shred pool. Regional alignment. Risk of monopoly? Legal</li><li>• trust no longer considered an issue.</li></ul>
2.	<p><b>EXPLANATION; SPECULATIONS; PROPOSITIONS</b></p> <p>Main themes: Objectives, vision, communication, teamwork, transparency, behaviour modification, spin out, trust, culture. Objectives. Cascade the principles, risk and reward</p> <p>The transition between the stages is clear from the behaviour and body language.</p>
3.	<p><b>ALTERNATIVE EXPLANATIONS; CONFLICTING REPORTS; DISAGREEMENTS</b></p>
4.	<p><b>NEXT STEPS IN DATA COLLECTION</b></p> <p>Analyse indicators for the transition</p>
5.	<p><b>REVISIONS;UPDATING CODING SCHEME</b></p>



**APPENDIX II: INITIAL LIST OF KEY THEMES**

Project Title	Thesis
Subject	Initial list of themes drawn from supply chain literature 67 in the first instance
Researcher	B. Wagner
Date	27.06.97

Theme:		
Aligned goals	Empowered	Process
Alliance partners	Environment	Procurement
Alliance agreement	Flexibility	Relationships
Assets	Future	Reputation
Attitude	Identity	Resources
Background	Influence	Responsibility
Behaviour	Innovation	Results
Champion	Inter-dependence	Rewards
Change	Investment	Risk
Commitment	Learning	Roles
Communication	Location	Spin-out
Competencies	Market Perception	Structure
Competition	Motivation	Supply chain
Conflict	Negative	Teams
Contract	Objectives	Technology
Control	One-sided	Tendering process
Corporate pressure	Outsourcing	Time
Costs	Overheads	Training
Culture	Overtime	Trust
Customer needs/ service	People	Understanding
Decision-making	Performance measures	Value
Dependence	Planning	Waste
	Power	



## APPENDIX IIA. Characteristics in each Stage and Literature Source

Stage I	Reference	Stage II	Reference	Stage III	Reference
Alliance agreement Contract refined	Frazier et al 1988 D'Aunno and Zuckerman 1987 Ring and Van de Ven 1994 Murray and Mahon 1993 Cherrett 1994	Reduced uncertainty	Williamson 1979 Folta 1998 Simon 1962 Barney 1991	Understanding of process	Sheth and Parvatiyar 1992 Best 1990 Chadwick and Rajagopal 1995 Dodgson 1991
Closer working relations	Mohr et al 1996 Whipple and Gentry 2000 Varadarajan and Cunningham 1995	Motivation Personal satisfaction High energy Compelling purpose	Frazier et al 1988 Ellram 1991 Macbeth and Ferguson 1994	Adapting cultures Reflection and soul searching	Barney 1986 Brouthers et al 1995 Cartwright and Cooper 1996 Slocum and Lei 1993 Brouther et a 1995
Commitment	Hardwick and Ford 1986 D'Aunno and Zuckerman 1987 Ghemawatt 1991	Feedback mechanism	Glaister and Buckley 1998 Gray 1998 Christopher 1992	Training needs assessed	Gray 1989 Cherrett 1994 Boddy et al 1998
Communicate vision Shared vision Expectations Ground rules	Ford 1980 Ring and Van de Ven 1994 Doz 1989	Inter-dependence	Landeros and Monczka 1989 Mohr and Spekman 1994 Spekman and Johnston 1986 Khan 1996	Performance sustainable	Best 1990 Heide and Stump 1995 Mohr and Spekman 1994
Developing skills in teamwork	Dierickx and Cool 1989 Ancona and Caldwell 1988	Participative decision making	Wageman 1997 Chen 1999 Ancona and Caldwell 1988 Monczka and Trent	Cost drivers difficult to quantify	Christopher 1992 Chadwick and Rajagopal 1995 Dyer 1997 Frazier et al 1988



Stage I	Reference	Stage II	Reference	Stage III	Reference
Identify strategic direction	Bakker et al 1994 Fairtlough 1994 Hamel 1991 Karnoe 1996 Kogut and Zander 1992	Conflict management	1993 Hirschman 1970 Lei and Slocum 1991 Bettenhausen and Murnighan 1985	Customer focus	Barney 1991 Harshman and Phillips 1994 Wageman 1997
Investment in relationship	Contractor 1986 Vardarajan and Cunningham 1995 Boddy et al 1998	Continuous improvement	Hamel 1991 Karnoe 1996 Mohr and Spekman 1994 Barney 1991	Increased technical and commercial know-how	Osborn and Hagedoorn 1997 Dodgson 1991
Leadership	Ancona and Caldwell 1988 Dyer 1977	Benefits clearer	Monczka and Trent 1993 Ellram 1993 Kanter 1994 Christopher 1992	Learning from each other and from experience	Arrow 1962 Argote 1996 Best 1990 Penrose 1959 Badaracco 1991 Dibello and Spender 1996 Chadwick and Rajagopal 1995 Ittner and Larcker 1996
Learning	Mahoney and Pandian 1992 Dyer and Singh 1998	Growth of commitment	Ghemawatt 1991 Giancarlo 1999 Morgan and Hunt 1994	Potential rewards better understood	Macbeth and Ferguson 1994
Mechanisms for coordination and control. Rules and procedures Feedback mechanisms Regular team meetings	Williamson 1975 Larson 1992	Increased social relations	Fairtlough 1994 Giancarlo 1999 Lorange and Roos 1993 Best 1990	Operations routines	Nelson and Winter 1982 Teece et al 1997 Koch and McGrath 1996 Reed and DeFillippi 1990
Negotiation	Ford 1980	Greater openness	Grey 1989 Bresnen 1996 Whipple and Frankel 2000	Strategic integration	Grant 1995 Best 1990



Stage I	Reference	Stage II	Reference	Stage III	Reference
Objective setting Explicit mutual goals	D'Aunno and Zuckerman 1987 Lorange and Roos 1993 Andrews 1980 Grant 1995	Environmental analysis	Gray 1989 Murray and Mahon 1993 Dyer and Singh 1998	Individuals become more flexible	Gray 1989
Performance metrics	Chadwick and Rajagopal 1995 Glaister and Buckley 1998 Iftner and Larcker 1996 Glaister and Buckley 1998	Longer-term planning	Frazier et al 1988	Competencies and skills appropriate for changing needs	Bakker et al 1994 Fairtlough 19942 Hamel 1991 Karnoe 1996  Kogut and Zander 1992
		Team skills developing	Monczka and Trent 1993 Wageman 1997	Dense communication network	Griffin and Hausser 1996 Debresson and Ammesse 1991 Pavitt 1992 Aoki 1988
Resource allocation and planning. Assign task responsibilities	Karnoe 1996 Saunders 1994 Varadarajan and Cunningham 1995 Parkhe 1998 Wernerfelt 1984	Internal and external networks forming	Best 1990 Debresson and Ammesse:1991 Fairtlough 1994	Shared norms and values	Ellram 1991 Hall 1992
Skills and competencies	Dimancescu 1992 Dodgson 1991	Transfer of knowledge between participants	Huber 1996 Levitt and March 1988 Nonaka and Takeuchi 1995	Teamwork promoting philosophy of cooperation	Best 1990 Penrose 1959 Cammish and Keough 1991 Hastings 1993 Tushman and Romanelli 1985 Polley and Dyne 1994 Dimancescu 1992
Social interaction. Transfer of ideas	McGrath 1984 Dyer 1977 Doz 1996	Joint value better understood	Macbeth and Ferguson 1994		



Stage I	Reference	Stage II	Reference	Stage III	Reference
Technological contribution	Giancarlo 1999 Dodgson: 1991 Mohr and Spekman 1994	Discussion promotes corrective action	Mohr and Spekman 1994 Eisenhardt 1992 Bettenhausen and Murnighan 1985 Hurst et al 1989		
Trust building Anticipation of reciprocity	Chadwick and Rajagopal 1995 Driscoll 1978 Sako 1992 Knoll and Leidner 1998 Lewicki and Bunker 1996 Granovetter 1985 Etzioni 1988				



## **APPENDIX III: TEAM QUESTIONNAIRE**

### **1.0 OBJECTIVES**

- 1.1 Are the strategic objectives clearly articulated to the team by the senior executives?
- 1.2 Are you aware of any form of contract or agreement? If so, do you fully understand the implications of the agreement?
- 1.3 Does the team fully understand the common mission and shared purpose?
- 1.4 How is senior management commitment manifest?
- 1.5 Does the team receive direction / instruction about the importance of external scanning and boundary spanning to gain information?
- 1.6 Who set the team objectives? Are clear benchmarks identified?

### **2.0 RESULTS**

- 2.1 What are the results of the team activity? Can these be quantified?
- 2.2 How motivated is the team? What has contributed to this?
- 2.3 Has teamwork affected the level of productivity?
- 2.4 How much control do you have over the activities?
- 2.5 Do you think that the group is prepared to take risk in order to develop more creative ideas?
- 2.6 What factors, if any would you consider contributed to innovation?: for example; Smooth internal processes; diversity of expertise within the team; information redundancy:

### **3.0 BUSINESS PROCESSES**

- 3.1 How well do you understand the allies business and business needs?
- 3.2 Do you fully understand the cost drivers in you business?
- 3.3 Do you understand the cost drivers between the alliance partners business?

### **4.0 TEAM PROCESSES**

#### **4.1 Communication**

- 4.1.1 How well does the team communicate e.g.:-
- 4.1.2 What are the mechanisms for inter and intra team communication e.g. minutes, memos, informal dialogue?
- 4.1.3 Boundary spanners play an important role in gaining information from outsiders. How does the team manage relations outside the group?
- 4.1.4 How far has the understanding and awareness of the alliance cascaded to personnel in the organisations?
- 4.1.5 Is there an obvious information flow/ direction and formality?
- 4.1.6 Is there any withholding of information?
- 4.1.7 Do you know everything that was important without asking?
- 4.1.8 Is there enough information exchange. Did individuals and teams communicate both orally and in writing?



## **4.2 Cohesion/norms/socialisation**

4.2.1 How did your team begin to develop working relationships?

4.2.2 How are new comers socialised into the group?

## **4.3 Decision making/ listening/ questioning**

4.3.1 Are you encouraged to positively contribute? How?

4.3.2 How does the team manage it's decision-making process?

4.3.3 Is there cooperation between members?

4.3.4 Is everyone allowed to air their views?

4.3.5 What is the effect of different cognitive styles, attitudes and values?

4.3.6 Are diverse viewpoints taken on board?

4.3.7 Does the team receive enough accurate information to make informed decisions?

## **4.4 Problem Solving**

4.4.1 Have you developed any problem solving skills.

- Ability to gather the required data?

- Are you able to make sound, free and informed choices and decisions?

- Are you able to implement the decisions with commitment? Was the team decisive?

- Are the decisions made appropriate and effective?

## **5.0 TEAM·DEMOGRAPHICS**

5.1 Do you think that the teams composition affects performance?

5.2 Do the team members know each other?

5.3 Have the members had similar lengths of tenure?

## **6.0 STRUCTURE**

6.1 What are the barriers to communication at this time?

6.2 Is the team able to translate the strategic objectives into operational objectives?

6.3 How compatible are the structures between the alliance companies at this time?

6.4 How can these be improved?

6.5 Can you identify any road block in the alliance at this time?

### **6.1 Procedures for Administrative Action- coordinating mechanisms**

6.1.1 What institutional reporting mechanisms are in place?

6.1.2 Are there any formal procedures for communicating between the teams?

6.1.3 Do people out with the team understand the role they play in providing support and information to the team?

6.1.4 How are the team activities reviewed to minimise duplication of effort and project overlap?

6.1.5 Does the wider organisation support the teams?

6.1.6 Does the team receive any feedback?

6.1.7 How is the team activity monitored and controlled?



## **6.2 Managing Meetings**

6.21 How well are the team meetings managed? For example

- does the meeting have:-
- a clear purpose and function?
- is it well organised and controlled - Chairperson?
- are issues resolved at one sitting?
- is the discussion and time well managed?
- is the outcome of the meeting formally recorded?

## **6.3 Managing Performance - appraisal and rewards**

6.3.1 Who sets the team performance targets? How?

6.3.2 How are the performance targets measured?

6.3.3 Are their financial rewards related to successful projects?

6.3.4 Do you expect to receive any financial rewards?

6.3.5 What about satisfaction due to pleasant interpersonal relations within the group or satisfaction due to successful team performance outcomes?

6.3.6 Are any type of sanctions imposed for lack of performance or other transgressions?

6.3.7 Are targets and responsibilities clear?

6.3.8 What happens when targets were missed?

## **6.4 HRM Policies**

6.4.1 Is the company appraisal scheme linked to team performance as well as individual performance?

6.4.2 Have you received any training in team skills?

## **7.0 TECHNOLOGY**

7.1 Do you use technology to communicate with other team members?

7.2 Have you gained any technological knowledge due to your participation in the cross functional team?

7.3 How compatible are the technologies between companies?

7.4 How important is this to the alliance?

## **8.0 PEOPLE**

### **8.1 Knowledge/ Skill of individual**

8.1.1 Does the teamwork give you the scope to develop new capabilities or competencies?

8.1.2 Have you developed any influencing skills, for example persuasion?

8.1.3 Have you developed skills in terms of being able to identify outcomes more effectively? i.e. problem solving

8.1.4 Have you developed any skills as regards managing the team meetings?

8.1.5 Have you developed any project management skills e.g. setting objectives, Identifying roles, Setting milestones, Analytical/planning skills



## **8.2 Individual needs/goals**

8.2.1 Are your personal goals aligned with the alliance goals?

8.2.2 How will the alliance affect your career development?

8.2.3 Does participation in the team increase your feelings of :-

- self awareness
- self identity
- self control
- feelings of recognition
- accomplishment
- influence and purpose

## **8.3 Learning**

8.3.1 So far has the team activity added to either individual or collective learning?

8.3.2 Has it been a catalyst for learning? Give examples of expanded knowledge.

8.3.3 Would you consider your team as a successful learning community?

## **8.4 Interpersonal skills**

8.4.1 Are there any personality problems in the team?

8.4.2 How is this dealt with?

## **8.5 Conflict resolution**

8.5.1 How do the team members overcome conflict?

8.5.2 How is individual self interest managed?

8.5.3 Would you consider conflicting ideas are potentially productive or not?

8.5.4 Is there conflict or was there on the whole a good atmosphere?

8.5.5 If so, what is the usual cause of this?

## **8.6 Resources**

8.6.1 How do the team members manage internal competition for limited resources?

8.6.2 Are there sufficient resources available to the team to carry out their job?

Does the team understand the resource requirements for the task in hand?

## **8.7 Leadership**

8.7.1 Regarding empowerment and autonomy of the leader and leadership style. Is there interference from other managers?

8.7.2 Is the leadership in the team formal or informal?

8.7.3 How was the team leader chosen?

8.7.4 Has the leadership change during the course of the project? Why?

8.7.5 Is the team leadership good or bad? Why?

8.7.6 Does the leader manage closely the way people work?

8.7.8 Does the leader dominate / control the process?



## **8.8 Roles**

8.8.1 How have the team members been chosen:-

- for their specialist expertise?
- for their ability to work in a team?
- for their skill such as leadership, giving good ideas. coordinating a group, completing a task?

8.8.2 Do individuals take on any particular role in the team?

8.8.3 Are there any roles missing in the team?

8.8.3 Does this affect the team performance?

## **9.0 POWER**

9.1 Has the alliance disturbed the balance of power between the companies?

9.2 Has the team been sufficiently empowered to make and act on their own decisions?

9.3 Have influential stakeholder all been identified?

9.4 Do you think this is important?

9.5 Have the alliance partners began to modify their behaviour?

9.6 Do you understand the sources of power in and organisation and how this can be harnessed to the teams benefit?

9.7 Has there been acceptance of the democratic process?

9.8 Are there any team members who have not contributed to the project?

9.9 Have personal ambitions aligned with the project goal?

9.10 Does anyone think that a certain member or group/clique is carving out a power base?

## **10 CULTURE**

### **10.1 Cohesion**

10.1.1 Is there visible willingness to adapt organisation culture, between the alliance members?

10.1.2 How is this demonstrated?

10.1.3 How does the team maintain morale, are you satisfied being a team member?

10.1.4 How open are team members?

10.1.5 Do team members look after each other?

10.1.6 Are people tolerant and did they share information and acceptance of other peoples annoying foibles?

10.1.7 Is there sensitivity to moods, reconciling and reducing tensions?

10.1.8 Is there compromise and admission of error?

10.1.9 Does the team work together successfully?

10.1.10 What are the problems?

### **10.2 Trust**

10.2.1 It takes time to develop trust between individuals. How is trust demonstrated?

10.2.2 Do you have trust in the leader?

10.2.3 Is there cooperation?

10.2.4 Does trust exist?



## **10.3 Commitment**

10.3.1 How does senior management manifest commitment?

10.3.2 How does team members feelings towards each other affect decisions-making and other group processes?

10.3.3 What was the level of commitment? Do people delay or sabotage initiatives?



**APPENDIX IV A: QUESTIONNAIRE CONSTRUCTION and THEME TRACKING**

THEME	QUESTION	LITERATURE SOURCE
Pre-alliance evaluation	<ul style="list-style-type: none"> <li>• Prior to the alliance was the partners cultural compatibility determined?</li> <li>• Prior to the alliance was there an environmental analysis conducted?</li> <li>• Did you do a cost/benefit analysis prior to the alliance?</li> <li>• How did you select the partner(s) for this alliance?</li> <li>• Has your company a past history of alliance involvement?</li> </ul>	<ul style="list-style-type: none"> <li>• Ford 1980</li> <li>• D'Aunno and Zuckerman 1987</li> <li>• Dwyer et al 1987</li> <li>• Gray 1989</li> </ul>
Alliance history	<ul style="list-style-type: none"> <li>• How did this relationship begin?</li> <li>• What triggered the motivation within your organisation to form an alliance?</li> <li>• How long had you been doing business with your partner prior to the alliance?</li> </ul>	<ul style="list-style-type: none"> <li>• Gray 1989</li> <li>• Ellram 1992</li> <li>• Larson 1992</li> </ul>
Groundrules	<ul style="list-style-type: none"> <li>• Is there a written contract?</li> <li>• Are there dispute resolution mechanisms documented?</li> <li>• How do you measure performance?</li> <li>• Have the terms of the contract changed in the course of the relationship?</li> <li>• How do you exercise control?</li> </ul>	<ul style="list-style-type: none"> <li>• Ring and Van de Ven 1994</li> <li>• Doz 1996</li> <li>• Gray 1989</li> </ul>



THEME	QUESTION	LITERATURE SOURCE
Present situation	<ul style="list-style-type: none"> <li>• How important is the relationship to the company?</li> <li>• How would you describe the benefits you get from the arrangement?</li> <li>• Are they only economic?</li> <li>• Were these benefits always present?</li> <li>• What are the disadvantages of the relationship?</li> <li>• Does your company have more or less leverage than your partner? - Why?</li> <li>• Has the balance changed over time? How?</li> <li>• Has the relationship enhanced your competitive position?</li> <li>• How long do you see the commitment to this alliance?</li> <li>• Describe the communication between the firms</li> <li>• Who is responsible for the management of the relationship?</li> <li>• What are the costs of maintaining the alliance?</li> <li>• How do you quantify these?</li> <li>• Have there been any disputes? How are these handled?</li> <li>• Is the alliance stable??</li> <li>• What kind of investments have you made in this alliance?</li> <li>• Were the alliance objectives clearly articulated?</li> <li>• Does everyone, including those not directly involved in the alliance understand the common mission?</li> <li>• Were the measurements of these objectives clear at the outset?</li> </ul>	



THEME	QUESTION	LITERATURE SOURCE
Alliance Evolution	<ul style="list-style-type: none"> <li>• Are there stages in the development of the alliance?</li> <li>• Can you describe these?</li> <li>• Has the alliance achieved its initial objectives?</li> <li>• Did the objectives change? What happened?</li> <li>• How have the mechanisms for feedback and control changed over time?</li> <li>• Has the structure of the alliance changed?</li> <li>• How well do you understand the partners business needs?</li> <li>• Do you understand the cost drivers in the alliance?</li> <li>• At what stage in the alliance did you find out?</li> <li>• Do you understand your partner's business processes?</li> <li>• How was commitment manifest?</li> <li>• How did trust develop?</li> <li>• Were all stakeholder interests identified?</li> <li>• How has the communication between partners changed over time?</li> <li>• What are the barriers to communication?</li> <li>• Does the wider organisation support the alliance?</li> <li>• What are the mechanisms of review and feedback in place?</li> <li>• Have the roles and responsibilities in the alliance changed over time? How?</li> <li>• Are the partners prepared to commit adequate resources to the alliance?</li> </ul>	<ul style="list-style-type: none"> <li>• Ford 1980</li> <li>• Dwyer et al 1987</li> <li>• Frazier et al 1988</li> <li>• Spekman et al 1998</li> </ul>
Power	<ul style="list-style-type: none"> <li>• Has the power balance between the partners altered over time? How? Why?</li> <li>• Have the companies become more interdependent during the course of the alliance?</li> <li>• Does this affect the partners' own corporate identity?</li> <li>• Has there been concern about the equity of reward or commitment of the alliance?</li> <li>• How significant has individual politicising been on alliance performance?</li> <li>• Have individuals been sufficiently empowered to make and act on decisions?</li> </ul>	McGrath et al 1995



THEME	QUESTION	LITERATURE SOURCE
Culture	<ul style="list-style-type: none"> <li>• How compatible is the alliance partners culture?</li> <li>• How important is this?</li> <li>• Has its importance changed over time?</li> <li>• Has the partner's organisational culture affected the alliance performance?</li> <li>• Have the participants in the alliance developed shared values and beliefs? — How?</li> </ul>	<p>Gray 1989 Murray and Mahon 1994</p>
Transition	<ul style="list-style-type: none"> <li>• Have you been aware of changes in stages, as the alliance has matured? When?</li> <li>• What critical incidents indicated a transition? Please describe them.</li> <li>• Were there typical behavioural indicators during these transitions?</li> </ul>	<ul style="list-style-type: none"> <li>• D'Aunno and Zuckerman 1987</li> <li>• Doz 1996</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Has the alliance been a catalyst for learning?</li> <li>• Where has the greatest learning taken place? E.g. people, process, technology, structure etc.</li> <li>• Can you identify some examples of learning directly attributable to the alliance?</li> <li>• Have individuals learnt alliance management skills?</li> <li>• Has the alliance identified new training and education requirements? Please describe</li> <li>• Has the alliance stimulated innovation?</li> </ul>	<ul style="list-style-type: none"> <li>• Doz 1996</li> </ul>
Dissolution	<ul style="list-style-type: none"> <li>• If you are no longer involved today, what were the factors that contributed to the dissolution?</li> <li>• Were there any periods of crisis?</li> <li>• What were the fundamental causes of these crises?</li> <li>• How were they managed and resolved?</li> </ul>	<ul style="list-style-type: none"> <li>• Dwyer et al 1987</li> <li>• Ellram 1992</li> <li>• Murray and Mahon 1992</li> <li>• Ring and Van de Ven 1994</li> </ul>



## **APPENDIX IV: ALLIANCE PROCESS QUESTIONNAIRE**

**Name of respondent (Optional):**

**Company name:**

**Position:**

**Date:**

### **1.00 BACKGROUND**

- 1.01 When was the company founded?
- 1.02 Describe your operations 5 years ago (10 years ago) and compare them with today?
- 1.03 What has been your revenue growth over the past five years?
- 1.04 What were the primary drivers for that growth?
- 1.05 What role have alliances played?
- 1.06 How important have they been to your corporate strategy?

### **2.00 BUSINESS DESCRIPTION**

- 2.01 What are the company's products and services?
- 2.02 In what market and industries does the firm participate?
- 2.03 How competitive are these?
- 2.04 What does your firm have to do to be successful?
- 2.05 Are alliances a part of the strategy of these businesses?

### **3.00 PRE ALLIANCE EVALUATION**

- 3.01 Prior to the alliance was the partners cultural compatibility determined?
- 3.02 Prior to the alliance was the partners financial viability determined?
- 3.03 Prior to the alliance was there an internal readiness assessment carried out in your company?
- 3.04 Prior to the alliance was there an environmental analysis conducted?
- 3.05 Did you do a cost/benefit analysis prior to the alliance?
- 3.06 How did you select the partner(s) for this alliance?
- 3.07 Has your company a past history of alliance involvement? Please describe.

### **4.00 ALLIANCE HISTORY**

- 4.01 How did this relationship begin?
- 4.02 What triggered the motivation within your organisation to form an alliance?
- 4.03 Was it individually or corporately driven?
- 4.04 Are they the same factors that keep you involved today? How have they changed?
- 4.05 In what way has your organisation history or management philosophy contributed to the success (or otherwise) of this alliance?
- 4.06 How long had you been doing business with your partner prior to the alliance?
- 4.07 What kind of changes in Product / Service where you (they) looking for?



- 4.08 How important was the alliance to your business when it first began?
- 4.09 Has it changed over time?
- 4.10 Describe the exchange in the early days and any important stages in its evolution?

## **5.00 GROUND RULES**

- 5.01 Was there evidence of corporate buy-in from the respective organisations?
- 5.02 Is there a written contract?
- 5.03 How formal / informal is it?
- 5.04 How formal / informal are your dealings with the partner (s)?
- 5.05 Are standard operating procedures in place?
- 5.06 Are there dispute resolution mechanisms documented?
- 5.07 Do you use any non-market pricing variations?
- 5.08 Are these variations taken account in the cost model?
- 5.09 How do you measure performance?
- 5.10 Have these changed over time?
- 5.11 Have the terms of the contract changed in the course of the relationship?
- 5.12 How do you exercise control?
- 5.13 How does this arrangement compare with other contractual arrangements?

## **6.00 PRESENT SITUATION**

- 6.01 What is the present economic value of the exchange?
- 6.02 How important is the relationship to the company?
- 6.03 How would you describe the benefits you get from the arrangement?
- 6.04 Are they only economic?
- 6.05 Were these benefits always present, or did they evolve over time?
- 6.06 What are the disadvantages of the relationship?
- 6.07 What are the advantages (disadvantages) of long term versus short term?
- 6.08 Does your company have more or less leverage than your partner? - Why?
- 6.09 Has the balance changed over time? How?
- 6.10 Has the relationship enhanced your competitive position? How?
- 6.11 Has it helped your company grow? How?
- 6.12 How long do you see the commitment to this alliance?
- 6.13 Describe the communication between the firms
- 6.14 Who is responsible for the management of the relationship?
- 6.15 What are the costs of maintaining the alliance?
- 6.16 How do you quantify these?
- 6.17 Have there been any disputes? How are these handled?
- 6.18 Has it been easy / difficult to maintain the alliance?
- 6.19 Is the alliance stable?
- 6.20 What are the factors that have contributed to this stability / instability?
- 6.21 What kind of investments have you made in this alliance?
- 6.22 Have these investments changed over time? How?
- 6.23 Were the alliance objectives clearly articulated?
- 6.24 Does everyone, including those not directly involved in the alliance understand the common mission?
- 6.25 Were the measurements of these objectives clear at the outset?



## **7.00 ALLIANCE EVOLUTION**

- 7.01 Are there stages in the development of the alliance?
- 7.02 Can you describe these?
- 7.03 Has the alliance achieved its initial objectives?
- 7.04 Did the objectives change? What happened?
- 7.05 How have the mechanisms for feedback and control changed over time?
- 7.06 Has the structure of the alliance changed?
- 7.07 How well do you understand the partners business needs?
- 7.08 Has this understanding changed over time? In what way?
- 7.09 Do you fully understand the cost drivers in your and your partners business?
- 7.10 Do you understand the cost drivers in the alliance?
- 7.11 At what stage in the alliance did you find out?
- 7.12 Do you understand your partner's business processes?
- 7.13 How was commitment manifest?
- 7.14 How did this change over time?
- 7.15 How did trust develop?
- 7.16 How has this changed over time?
- 7.17 What factors contributed to fluctuating trust?
- 7.18 What impact did this have on the alliance performance?
- 7.19 Were all stakeholder interests identified?
- 7.20 How were stakeholders interests articulated?
- 7.21 Have the stakeholders changed over time?
- 7.22 How has the communication between partners changed over time?
- 7.23 What are the barriers to communication?
- 7.24 Does the wider organisation support the alliance?
- 7.25 What are the mechanisms to evaluate team as well as individual performance?
- 7.26 What are the mechanisms to evaluate alliance performance?
- 7.27 What are the mechanisms of review and feedback in place?
- 7.28 Have the roles and responsibilities in the alliance changed over time? How?
- 7.29 Are the partners prepared to commit adequate resources to the alliance?
- 7.30 What type of resources?
- 7.31 Has this changed over time?
- 7.32 Has there been any evidence of a performance plateau?

## **8.00 POWER**

- 8.01 Has the power balance between the partners altered over time? How? Why?
- 8.02 Have the companies become more interdependent during the course of the alliance?
- 8.03 In what way?
- 8.04 Does this affect the partners' own corporate identity?
- 8.05 Is this a problem? Why?
- 8.06 Has there been concern about the equity of reward or commitment of the alliance?
- 8.07 How has this been manifest?
- 8.08 Has the issue of equity been properly addressed?
- 8.09 How significant has individual politicising been on alliance performance?
- 8.10 Have individuals been sufficiently empowered to make and act on decisions?



## **9.00 CULTURE**

- 9.01 How compatible is the alliance partners culture?
- 9.02 How important is this?
- 9.03 Has its importance changed over time?
- 9.04 Has the partner's organisational culture affected the alliance performance?  
How?
- 9.05 Have the participants in the alliance developed shared values and beliefs? —  
How?
- 9.06 What factors have hindered the alliance?
- 9.07 How do you see the way forward?

## **10.00 TRANSITION**

- 10.01 Have you been aware of changes in stages, as the alliance has matured?  
When?
- 10.02 What critical incidents indicated a transition? Please describe them.
- 10.03 Were there typical behavioural indicators during these transitions?

## **11.00 LEARNING**

- 11.01 Has the alliance been a catalyst for learning?
- 11.02 Where has the greatest learning taken place? e.g. people, process, technology, structure etc.
- 11.03 Has the type of learning changed during the alliance?
- 11.04 Can you identify some examples of learning directly attributable to the alliance?
- 11.05 Have individuals learnt alliance management skills? Please describe these?
- 11.06 Has the alliance identified new training and education requirements? Please describe
- 11.07 Can the learning in the alliance be measured?
- 11.08 Has the alliance stimulated innovation? Please describe
- 11.09 Are there mechanisms or structures to transfer knowledge to other alliances?
- 11.10 What are they?
- 11.11 Is the knowledge mostly tacit, within individuals heads or explicit, in procedures etc? - Please explain.
- 11.12 Has the learning from previous alliances been applied in more recent alliances? How?

## **12.00 DISSOLUTION**

- 12.01 If you are no longer involved today, what were the factors that contributed to the dissolution?
- 12.02 Were there any periods of crisis? How many?
- 12.03 What were the fundamental causes of these crises?
- 12.04 How were they managed and resolved?
- 12.05 At what stage in the alliance did they occur?



- 12.06 Were there any critical incidents that could have caused an exit from the alliance?
- 12.07 How were these resolved?
- 12.08 What effect did this have on the relationship in general?
- 12.09 What effect did this have on the structures or processes in the alliance?
- 12.10 Was this beneficial or not?
- 12.11 Are you able to exit from the relationship?
- 12.12 At what stage in the alliance could you get out with minimum disruption?
- 12.13 What would be the costs of exit, in both personal and economic terms?
- 12.14 Was withdrawal implicit throughout the duration of the alliance?
- 12.15 Were options considered?
- 12.16 What were they?
- 12.17 Do you think your organisation is crisis-prepared or crisis prone?
- 12.18 Please explain these characteristics



**APPENDIX V. Table of Interviews**

No.	Company	Name	Title	Venue	Date	Time
<b>Miscellaneous</b>						
1.	Schlumberger	J Bl	Managing Director	Greenock	March 1998	90
2.	Schlumberger	G B	Operations Manager	Greenock	March 1998	90
3.	Schlumberger	I G	Materials Manager	Greenock	March 1998	90
4.	Schlumberger	J M	Finance Manager	Greenock	March 1998	90
5.	Schlumberger	K	Quality Manager	Greenock	March 1998	90
6.	Schlumberger	J D	Quality Manager	Greenock	March 1998	90
7.	Schlumberger	C McL	Quality Technician	Greenock	March 1998	90
8.	Schlumberger	I A	Team Leader	Greenock	March 1998	90
9.	Schlumberger	C C	HR Manager	Greenock	March 1998	90
10.	Playtex	H M	Internal Consultant	Greenock	April 1998	60
11.	Compaq	G D	MD	Erskine	March 1998	60
12.	John Dickie Construction	R P	MD	Thornlibank	January 1998	90
13.	James Howden &Co	Dr Wilson	MD	Glasgow	January 1998	60
14.	Kinloch Electronics	Dr McKay	MD	Greenock	January 1998	60
15.	Playtex	M H	MD	Greenock	January 1998	90
16.	Glenmorangie	G W	Operations Manager	Edinburgh	February 1998	90
17.	Royal Ordnance	Dr Gilks	Director	Bishopton	March 1998	120
18.	Kinlock electronics	S McS	Operations Director	Greenock	March 1998	120
19.	Linn Products	Nl Mc	Operations	Waterfoot	June 1998	120
20.	Grants Whiskey	G W	Operations Director	Bellshill	Sept. 1998	90
<b>IDV Interviews</b>						
21.	IDV	E H	Procurement Director	Dublin	August 1996	90
22.	IDV	P Br	Buyer	Dublin	August 1996	90
23.	IDV	M H	Buyer	Dublin	August 1996	90
24.	IDV	De O'C	Materials Manager	Dublin	August 1996	90
25.	IDV	F C	Quality	Dublin	August 1996	90



26.	IDV	M S	Quality	Dublin	August 1996	90
27.	IDV	E D	Marketing	Dublin	August 1996	90
28.	IDV	P O'R	Operations supervisor	Dublin	August 1996	90
29.	IDV	E D	Marketing	Dublin	July 1997	70
30.	IDV	M S	Quality	Dublin	July 1997	55
31.	IDV	P B	Buyer	Dublin	Sept 1997	90
32.	IDV	M H	Buyer	Dublin	Sept 1997	75
33.	IDV	D O'C	Materials Manager	Dublin	Sept 1997	55
34.	IDV	P O'R	Materials controller	Dublin	Sept 1997	60
35.	IDV	E H	Procurement Director	Dublin	March 1997	90
36.	IDV	E H	Procurement Director	Dublin	March 1998	120
37.	UDV	M S	Quality	Dublin	26 Aug 1999	90mins
38.	UDV	P B	Buyer	Dublin	26 Aug 1999	90mins
39.	UDV	M H	Buyer	Dublin	26 Aug 1999	90mins
40.	UDV	D O'C	Operations	Dublin	26 Aug 1999	90mins
Killeen Interviews						
41.	Killeen	T L	Managing Director	Dublin	Aug 1996	90
42.	Killeen	L K	Financial Director	Dublin	Aug 1996	90
43.	Killeen	S F	Operations Manager	Dublin	Aug 1996	90
44.	Killeen	E P	Print Manager	Dublin	Aug 1996	90
45.	Killeen	F S	Commercial Manager	Dublin	Aug 1996	90
46.	Killeen	S K	Special projects manager	Dublin	Aug 1996	90
47.	Killeen	T R	Commercial manager	Dublin	Aug 1996	90
48.	Killeen	P C	Quality Supervisor	Dublin	Aug 1996	90
49.	Killeen	B	Quality Supervisor	Dublin	Aug 1996	90
50.	Killeen	T R	Commercial manager	Dublin	July 1997	30
51.	Killeen	S K	Special projects manager	Dublin	July 1997	60
52.	Killeen	E P	Print Manager	Dublin	July 1997	65
53.	Killeen	F S	Commercial Manager	Dublin	July 1997	60
54.	Killeen	S F	Operations Manager	Dublin	July 1997	50



55.	Killeen	L K	Financial Director	Dublin	Aug 1997	60
56.	Killeen	P H	Sales	Dublin	Sept 1997	60
57.	Killeen	T L	MD	Dublin	Sept 1997	45
58.	Killeen	S K	Special projects Manager	Dublin	25 Aug 1999	90mins
59.	Killeen	T O'C	Operations Manager	Dublin	25 Aug 1999	90mins
60.	Killeen	F D	MD	Dublin	25 Aug 1999	150
<b>Shell Expro UK Limited - Interviews</b>						
61.	Shell	S T	Logistics Manager	Aberdeen, Tullos	June 1998	90
62.	Shell	G I	Commercial Manager	Aberdeen, Altens	June 1998	90
63.	Shell	TG	Asset Manager	Aberdeen, Altens	June 1998	60
64.	Shell	J Mac	Asset Manager	Aberdeen, Torry	June 1998	90
65.	Shell	G I	Contract Specialist	Tullos	Nov 1998	60
66.	Shell	B K	Logistics facilitator	Tullos	Nov 1998	60
67.	Shell	J Mac	BIP	Torry	Nov 1998	60
68.	Shell	S T	Supply Logistics Manager	Tullos	Nov 1998	60
69.	Shell	T G	Asset Manager	Altens	Nov 1998	20
70.	Shell	S T	Supply Logistics	Tullos	May 1999	120
71.	Shell	T G	Asset Manager	Altens	May 1999	90
72.	Shell	G L	UESL	Tullos	June 1999	120
<b>Seaforth Maritime Limited - SML</b>						
73.	Seaforth	M P	Base Manager	Aberdeen, Torry	June 1998	90
74.	Seaforth	AB	Manager	Aberdeen, Nord	June 1998	60
75.	Seaforth	M P	Base Manager	Torry	Nov 1998	60
76.	Seaforth	D B	Base Manager	Altens	Nov 1998	20
77.	SML	D B	Altens Base Manager	Altens	May 1999	60
78.	SML	G I	Contract Manager	Altens	May 1999	90
79.	SML	I H	Commercial Manager	Altens	June 99	120
80.	SML	G N	Operations Manager	Altens	June 1999	120
81.	SML	D B	Altens Base	Altens	May 1999	60



			Manager			
82.	SML	G I	Contract Manager	Altens	May1999	90
83.	SML	I H	Commercial Manager	Altens	June 2, 99	120
84.	SML	G N	Operations Manager	Altens	17 June 1999	120
<b>ARR-Craib – ARRC</b>						
85.	Craib	B P	Transport Manager	Aberdeen, Torry	June 1998	90
86.	Craib	E A	M.D.	Aberdeen Tullos	July 1998	60
87.	Craib	G C	Director	Dyce	Oct 8 1998	90
88.	Craib	B P	Transport manager	Torry	Feb 15 1999	60
89.	Craib	E A	MD	Altens	24June, 1999	60
<b>Sun/ Birkby's – Secondary Interviews</b>						
90.	SUN	I G	European Supply Logistics	Linlithgow	April 1999	120
12	Sun	Secondary interviews				
7	Birkbys	Secondary interviews				



## **APPENDIX VI: BACKGROUND TO IDV/KILLEEN ALLIANCE**

### **IDV Operations Ireland**

**History:** Justerini and Brooks Ltd. was established in 1749. In 1857, the Gilbey family set up W and A Gilbey Ltd as a wines and spirits business. Just over a century later Gilbey merged with Justerini and Brooks and Twiss, Browning and Hallows to form International Distillers and Vintners (IDV) which Grand Metropolitan acquired in 1972.

In 1998 the boards of Guinness and Grand Metropolitan announced the merged companies into DIAGEO.

**International Distillers and Vinters**, is an international wines and spirits company that produces, markets and distributes a wide range of branded drinks throughout the world via a network of companies and distribution partnerships. Trading in over fifty countries, IDV locations are the UK, US, Canada, Ireland, Spain, France, Italy, Portugal and South Africa.

IDV acquisitions include Ramana Sambuca in 1986, Heublein (owners of Smirnoff) in 1987, Christian Brothers of California and Metaxa of Greece in 1989, and Anglo Espanola Distribucion, Spain in 1990. A substantial interest in Cinzano, acquired in 1985, led to full ownership in 1992. Other significant events in 1992 were acquisition of a 30% share in Gonzalez Byass, Spain, a joint venture in Uganda, and several investments in the Far East.

1993 was a particularly eventful year that brought expansion into Russia, Poland, the Czech Republic and China, the acquisition of Buton of Italy, partnerships in Chile, India and the Caribbean, and an equity stake in Laurent-Perrier Champagne.

**IDV Operations Ireland** (Originally Gilbeys of Ireland, Manufacturing) with sales of over £80M, and 260 employees was set up in 1990 to more efficiently and cost-effectively service the Gilbeys and Bailey's companies involved in production of quality brands. (Grand Metropolitan Fact Book 1994)



In 1970 Gilbey's examined the idea of creating a new Irish product embodying the national culture. Whisky and dairy products were highlighted as two key exports reflecting Irish tradition and natural heritage. Scientific development, to produce an acceptable taste and stable blend, took two years and by mid 1974 the company had achieved the launch of Bailey's Irish Cream Liqueur. By 1980 one million cases had been sold. In value terms, this accounts for 1.6% of Ireland's overall exports, while 5% of the country's milk production is used in the making of Bailey's.

Europe is now Bailey's single biggest market accounting for 51% of sales. North America takes 30%, duty free outlets have 12%, and the remaining 7% is divided between emerging markets in Asia, Africa and Latin America.

IDV Operations Ireland produces Bailey's Original Irish Cream, Sheridan's, Emmets, O'Darby and Dubliner for world markets and Smirnoff for Ireland. Manufacturing facilities are in Dublin and Bailieboro, County Cavan.

### **Materials / plant set up**

Bailey's liqueur is manufactured from cream, Irish whisky and chocolate flavours. Most cream is made in the summer months ranging from June to October. The ratio of cream availability between summer and winter is usually about 13:1.

The Dublin plant has six main bottling lines, one for Smirnoff, one for Sheridans and four for Bailey's. Two of the Bailey's lines are high speed single size lines; the other two are able to cope with many different sizes of bottles, ranging from miniatures to one litre. A considerable number of imaginative value adding packages is used. In addition, bottle and package labels vary in design between specific markets.

Grand Metropolitan is an organisation with particular skills in brand marketing and worldwide management. While supporting existing products and making relevant add-on acquisitions and alliances, the group has built its business through consistent development



of new brands and markets. In pursuance of this strategy, marketing expenditure increased in 1995 to a record level of just over one billion pounds. Brand support involves promotions, often with special bottle and packaging that vary in timing and scale in different geographical markets.

A summary of the consolidated financial performance of Grand Metropolitan and also Diageo is set out in the table below: -

	1994 Grand Met	1995 UDV Grand Met	1996 UDV Grand Met	1997-1998 Diageo 18 months ended June 1998
Turnover £m	7780	8025	8,025	17,592
Income after tax £m	669	622	649	1,459
Earnings per share	32.2p	29.8p	31.0p	34.5p

Source: Press release: Proposed Merger of Grand Met and Guinness.  
1998 Annual Report and Accounts

**Killeen Corrugated Products.** Killeen Paper Mills, was established in 1902 to make paper, using rags and straw as the basic raw material. The company struggled to exist until the outbreak of war in 1939, when a scarcity of paper opened up new markets. In 1942 the company started to manufacture paper bags and wrapping paper and additional paper making machinery was installed in 1944 to meet growing demand.

The first corrugating machine in Ireland was installed in 1949 at Killeen when the Company embarked on an extensive programme for the manufacture of corrugated boxes and packaging. A paper board making machine was subsequently installed to produce liner and chipboard for corrugated boxes. It was at this time that an export demand was identified for similar products in the UK.

In 1963, Killeen Paper Mills was taken over by National Board and Paper Mills of Waterford, owned by the St. Joe Paper Company of Florida, USA.



In 1969, a new factory was built on a site off the main Dublin/Nass Road for the production of corrugated materials. It was intended that the existing plants at Killeen and Waterford would close down after work was transferred to the new plant. Unfortunately, the new factory was completely destroyed by fire before going into production.

In 1989, European Paper and Packaging Corporation (EPPIC), with the Jefferson Smurfit Group holding a minority interest, acquired the company. In 1993 Killeen Corrugated Products became a fully owned subsidiary of the Jefferson Smurfit Group via Smurfit B.V. Holland.

The Jefferson Smurfit Company has grown from a locally trading Irish Company to become the world's leading paper-based packing company in less than forty years. The Group is growth orientated and has taken quantum leaps in size through acquisition. A central feature of the Group's acquisition strategy has been to identify, acquire and subsequently rationalise undervalued or under performing assets.

1998 was a watershed year for the group and the industry, due to a merger between Jefferson Smurfit Corporation (JSC) and Stone Container Corporation (Stone). The Smurfit-Stone Corporation was created in November 1998. Core business includes corrugated containers, folding cartons and bag packaging, supported by an integrated mill system with significant fibre resources. Smurfit-Stone operates approximately 300 facilities worldwide.

Killeen manufactures ten thousand (10,000) tonnes of paper per annum and about 75% is made from recycled material. In producing corrugated board and boxes the company uses approximately seventeen hundred (1,700) tonnes of waste fibre per annum, which is recycled and converted into paper.

The making of corrugated board involves gluing two flat sheets of paper to paper of a waveform. In some cases the flat outer surface is coated with clay that takes twenty-four



hours to cure before it is ready for printing. Where Killeen contributes most of its expertise is in printing with up to seven colours, often in complex subtle patterns, using a flexographic process.

Following printing, the cardboard is cut to shape creased ready for folding into the case and palletted for dispatch. Production processes are continuous and of high volume so that product changeovers involve extensive disruption. Raw paper storage is extensive and materials' handling is significant at the start up of new production runs.

For twenty years IDV Operations has been a significant customer to Killeen who provides packaging and printing of the highest quality possible. Killeen's other customers include leading producers of beverages, food, agricultural products and pharmaceuticals.

Recent financial performance of the Jefferson Smurfit Group is as follows: -

	1992	1993	1994	1995	1996	1997	1998
Turnover IR£000	133,215	104,226	110,637	326,373	193,712	2,570,864	2,887,879
Profit after tax IR£000	112,501	46,786	297,010	311,044	139,716	109,142	139,910
Ordinary Share Dividend	0.551p	3.088p	2.7p	4.0p	4.2p	6.2p	6.6p

Source: Jefferson Smurfit Group PLC Annual Report 1996 and 1998

NB. Killeen figures are not separately identified in publicly available information.

AN OVERVIEW OF THE SUPPLY CHAIN

IDV's Customer Services department receives monthly forecasts from each of its customers, who are the National Marketing Companies (NMC's). Similar information is also sent to IDV Ireland from International Customer Services (ICS).

*"The National Marketing Companies are our customers, they generate forecasts for us and the NMC get information from their customers. Information passed on by the NMC is*



*consolidated. Generally the NMC would give us a forecast for say six sizes of Bailey's or Smirnoff. By and large, we don't produce that for a specific customer, unless it is for a promotion."* (PDUDV9715)

The market is divided into big volume NMC's, in the USA, Germany, UK, France, or Spain and IDV Operations deals directly with them. The International Customer Service Centre (ICS) based in London picks up information from all the smaller and outlying markets and NMC's, consolidates it and then places orders with IDV Operations.

An example of such an ICS forecast might be that Singapore requires 100 cases, Malaysia 100 cases and Hong Kong 300 cases. ICS gathers these together and IDV actions the order without having to communicate directly with the individual outlets in the markets. The ICS also deal with NMC's that handle the IDV multi-brands and sometimes they are not even NMCs. Sometimes these are just agencies that IDV has set up in countries where it supplies J&B, Gilbey's Gin, Malibu or Bailey's.

The International Customer Service centre collects and distributes all the orders to the appropriate manufacturing operation, such as Bailey's, J&B, Cinzano and Smirnoff, who return the completed order to the ICS for shipment to the specific markets. This means that customers in the market do not have to deal with the manufacturing companies. The ICS centre does the invoicing in local money so that the customer is not involved in currency transactions. IDV deals directly with huge markets where the bulk of the business is only Bailey's. All the foregoing information is directed to the coordinator responsible for order processing and to the customer's coordinator responsible for handling market demand.

Data is brought together from the NMC's and the ICS. This includes the supply chain demand forecast and weekly and monthly updates, and is used to formulate a base plan that takes into account changing demand patterns, stock and any other factors required to meet the forecast. The plan overlays sales information as it comes in and weekly meetings with IDV production and materials people, including Killeen personnel, serve to track and update progress and changes.



A daily meeting takes place between IDV staff responsible for production, materials and logistics to co-ordinate demand and production and to discuss forecasts and production planning. A representative responsible for Killeen customer liaison is in attendance. These kind of meetings took place prior to the partnering agreement and were not specifically set up with the aim of including Killeen. However, the alliance process relied so much on Killeen representation that, with passage of time, Killeen became an integral party to the planning.

Information entered into the Materials Requirements Plan (MRP) is converted into a detailed production plan called the Finite Scheduler, and allocated to production to generate orders. The Finite Scheduler identifies the quantity that a line can produce in a given period of time, and involves a weekly phased forecast and shipping plan. Listings are manually updated on a daily basis and order receipts tracked and monitored against forecasts. The short-term planning horizon is between one and four weeks and the medium to long term horizon, five to fifty two weeks.

Information produced manually is given to all suppliers in a report format. Data is generated for the Demand Requirement Plan and Materials Requirement Plan. This draws out the production requirement and materials explosion for a six-week period, broken down by market and into numbers of bottles, labels, etc. This breakdown is given to the appropriate supplier, labels to labels supplier, bottles to bottles supplier, cartons to cartons supplier etc. and as it attends the daily meetings, Killeen has the supply chain information first hand.



## APPENDIX VII: BACKGROUND TO THE SUPPLY CHAIN ALLIANCE

### Shell Expro (Supply Logistics) from 1994 to present

In 1994 Shell Expro (UK) *Transport and Supply* Department's name changed to *Logistics and Procurement* signalling a raising of the profile of the two activities. Historically Procurement had been remote both physically and in terms of its activities. Procurement was seen as the commercially oriented, intellectual custodian of the business case with responsibility not only for getting new business and drawing up contracts but also for warehousing and storage.

In contrast, Logistics was involved with use of airplanes and boats. The arrangements for these called on the expertise of marine and aircraft specialists. Logistics was less concerned with the commercial side of the business which was taken care of by the procurement people. Procurers saw themselves as businessmen and on the most part they and Logistics communicated infrequently, if at all.

Within Logistics there are four operational service lines, Air, Marine, Supply and Waste; all supported and linked by the Business Development programme and working to Shell quality standards.

In Logistics, the name change was intended to pave the way for a philosophical and behavioural shift and it coincided with the introduction of a Total Quality Management programme. Instead of simply talking about transportation, Logistics began to look at customers who needed the goods in the containers and the people who travelled in the planes and boats.

This meant identifying both the person paying and the individual using the service and examining all aspects of their custom.



*Well Engineering in the 90's* was the next step. Major drilling was out-sourced with contractors now directing construction and working on platforms and rigs, instead of this being done by Shell drilling teams.

An out-sourcing strategy involves giving contractors greater responsibility and accountability for managing the scheduling and execution processes, to allow Shell staff to focus on long term planning, analysis and business improvements.

Out-sourcing drilling and oil production meant that Shell's core business changed from hands-on engineering to concentrate on exploration and reservoir management. This put in jeopardy peripheral departments like Logistics.

The most extreme market perception of Shell is of an enormously wealthy company that can afford to behave in an aggressive and arrogant manner. It is in this context that Shell implemented in 1996 its *enhancement* phase. The aim of which was to dispel the image of "*control and tell*". The shift was from an unalloyed use of power to a more open entrepreneurial environment that more closely involved contractors.

People had been leaving mostly through natural wastage, but sometimes it was because contractors were now doing the work. This caused resentment and the feeling was that the regular workforce was being taken advantage of by these outside contractors. In many people's minds, the job could have been done better and cheaper in-house. The challenge for some was to prove that by getting back to basic in-house expertise and knowledge, Shell would end up with a more efficient and cost effective service. Now, with fewer Shell people about, valuable work was handed out, and at the same time Shell was trying to maintain control as before.

Others saw the change as a breath of fresh air. Project teams were there to solve problems and it was quickly apparent that "*if you have brought a team together, then management had better make use of it. Don't just give the team members a job, say a few nice things,*



*pat them on the head and wander off. If you don't believe them, they won't help you a second time."* (LQMSE9829)

Management took on board the enhancement phase and employees were encouraged to use initiative and to experiment. This conflicted with the old attitude when no mistakes were tolerated. In the new philosophy, employees were not to be afraid of making mistakes and if they did, to learn from them. A learning concept was abroad, although not universally accepted.

Shell is still in this enhancement phase although Logistics and Procurement remain separate. Procurement is part of Finance, and Logistics is considered a technical service, which is reasonable from a hierarchical organisation point of view but illogical from a supply chain stand point. The supply chain appears broken and one of the challenges is to close this gap.

Logistics provides a full logistical service to its internal customers, the combined Brent and Northern business unit, as well as Central and partial support to the Southern business units.

By late 1998, the price of crude oil had fallen to less than \$14 dollars a barrel (by comparison it stood at \$20 in 1996) and in December 1998 the price fell to an all time low of \$8. This was caused by a combination of factors including, excess production world wide, the Asian recession and the prospect of a slow-down in the global economy. In November 1998, the Anglo-Dutch Shell oil group reported a 56% collapse in third-quarter net profits to \$841 (£497m); a forecast far worse than predicted.

Mark Moody-Stuart, Chairman of Shell UK, promised a dispassionate and fundamental review of Shell's extensive asset base, pledging that the company would use these disappointing results as a milestone and catalyst for changing the group's traditional consensus-driven culture (Financial Times p 22, November 6 1998).



Corporate determination to deal with long-term under-performance has involved restructuring all of Shell's businesses. Technical services have responded quickly and are working to reduce budgets by setting up supply chain alliances.

### **Seaforth Maritime - logistics operations**

Seaforth operates a custom-built, marine supply base in Aberdeen Harbour; the principal port servicing exploration and production activity in the UK North Sea Continental Shelf. The facilities include the following: -

- a four-berth base with a total quay length of 285 metres. The berths are accessible at all tides and have a minimum water depth of 5.6 metres.
- multiple and simultaneous loading of deck cargo and bulk materials
- supervision of operations over twenty-four hours, seven days a week, including co-ordination of land transport, craneage and plant, stevedoring, agency services and communications

Seaforth Maritime is part of Halliburton and Brown and Root, USA, one of the world's leading offshore energy support companies. The company's logistics division provides a comprehensive range of onshore services and facilities for offshore operations. These include a "one stop shop" marine support base, pipe storage and handling, short and long distance trucking, warehousing, distribution and office accommodation.

Seaforth began as an engineering company twenty seven years ago. The oil market crisis in the 1980's forced Seaforth to reduce its asset base and sell its fleet of ten to twelve supply vessels, releasing £300m of tied up capital.

Halliburton acquired the company in late 1993. At that time Seaforth comprised four wholly owned subsidiary companies, Seaforth Logistics Ltd (SLL), Seaforth Marine Services Ltd (SMSL), Seaforth Kinergetics Ltd (SKL) and Seaforth Ltd. Seaforth's combined turnover was about £20m. Of these, three subsidiary companies have since been sold, wound up or merged within other parts of the Halliburton Organisation.



Up until 1995 most oil companies managed their own logistics and Seaforth sold its customers a service by the hour. Efficiency was irrelevant, in fact, the more inefficient, the more money was made by Seaforth; it was a “*licence to print money*.” The objective was to keep trucks and men on the job for as long as possible. The longer the man and truck were out, or the boat idle at the quayside, the more Seaforth was paid.

Since 1996, driven by Brown and Root to do business differently, the company had to be transformed. Contractors and the oil companies alike realised that the industry could not sustain existing operating costs in the light of the depressed oil market. Nevertheless, it was difficult for Seaforth to sit around a table with Shell and discuss issues unspoken previously. It also required a major shift in mind set on the part of the oil companies who, up to that time, decided matters in isolation, as though they were a cut above the competition. Today, everything has changed, and every oil company understands that it is doing the same thing to the same end and as a consequence vessels and other infrastructure are often shared. Entire logistics operations are being contracted out for the sake of cutting costs.

This sea change was forced by a number of factors; the oil crisis in the 1980's, a maturing industry, aging platforms, changing profile of production, crude oil of lesser quality than in the past and reduced payback. In essence, the need to survive and to continue to make money drove the companies to consider radical cost reduction while at the same time maintaining or increasing production to get economies of scale. Seaforth is now accountable for the entire logistics process on behalf of several oil companies.

According to its own marketing literature, today Seaforth Maritime Limited (SML) continues to develop the traditional logistics business of Seaforth Logistics Ltd (SLL) by providing added value services, structured within innovative commercial arrangements, to a growing client base. In particular SML employees are said to pride themselves in their ability to operate in diverse cultural environments that require flexible management styles.



Seaforth Maritime's current turnover is about £23M; more than double that in 1995. Margins however are less than 3% and this together with an austerity policy imposed by Brown and Root, which discouraged investment and replacement of assets, has resulted in disappointing financial returns. The future of the oil and gas industry in general depends on achieving greater cost effectiveness. Seaforth Maritime's declared business mission is to offer integrated management and services in packages that reduce interface costs and lower overall operating expenditure by improving the efficiency in the client's supply chain.

The overriding motivation for Seaforth to be part of the new Supply Chain Alliance was the attraction of securing Shell business. However, a great deal of time, effort and resources have been committed to the SCA and it is still difficult to accurately calculate the return.

### **A.A.R. Craib Transport Limited**

Two local, independent Scottish companies, Aberdeen Road Runners (ARR) and Craib Transport, merged in January 1983. Aberdeen Road Runners was an oil related specialist that had developed a strong customer base of major UK and European players in the oil industry. Craib was a traditional long distance haulier serving the paper, food and steel businesses.

By constructing a custom built depot at Dyce, Aberdeen Road Runners had over stretched its resources and was advised to seek a partner. ARR and Craib's close working relations lead to their merger in 1983. In 1985 Mr. G. Craib bought out the major shareholders of Aberdeen Road Runners and introduced his own management team.

Since then the company has grown steadily, from a fleet of about 25 vehicles and annual turnover of just over £1M to about 120 vehicles and a £10M turnover. In early 1999, the company succeeded in being awarded a substantial non-oil related contract that will double its annual turnover. Nevertheless the company directors take a conservative approach to growth and concentrate on developing infrastructure in their Dyce headquarters.



Craib's commitment to quality is demonstrated in adoption of the ISO 9002 and working towards the BS EN ISO 1400 Environmental Standard. The organisation is apparently concerned to control the impact of its activities on the environment, to undertake environmental reviews or audits, as well as to live up to its Investors in People accreditation.

## **AN OVERVIEW OF THE SUPPLY CHAIN**

The Supply Chain Alliance (SCA) partners are Seaforth Maritime Limited (SML), ARR Craib Transport Limited (ARRC) and Shell UK Expro (responsible for Supply Logistics) who is also a customer member of the SCA. Shell Expro made available the physical assets, which include the Altens (AOB), and Torry Marine bases (TMB) to help achieve the SCA objectives

**Altens Operating Base (AOB).** AOB is a 36acre site located four miles south of Aberdeen harbour. It has four large heated warehouses providing about 15,000 cubic metres of internal storage with racking and 25,000 cubic metres of bulk storage as well as Receipts, Dispatch and Central Packing areas. In addition, there is 40,000 cubic metres of external storage serviced by either concrete or tarmac roads. The site also has a centralised chemical packing facility and is licensed to handle waste.

**Torry Marine Base (TMB).** TMB is a secure nineteen acre site leased from the Aberdeen Harbour Board and the local council with a 165 metre long quay dredged to a depth of 5.6 metres. There is access to a further berth at Woodacon quay which is 120 metres long. There are two fixed cranes on the base, each with the capacity to lift up to 45 tons and with a reach to any part of a vessel's deck.

TMB facility has two warehouses and a Shipping Office. The latter houses the Marine Control Department, which maintains radio links with Northern and Central North Sea offshore platforms and provides information ranging from weather reports to vessel positions. A Road Transport Control Centre executes and monitors road transport requirements.



**APPENDIX VIII: BACKGROUND TO SUN / BIRKBYS ALLIANCE**

**Sun Microsystems**

A group of graduate students from the University of California and Stanford University identified a growing demand in the technical market for powerful computer workstations, with clear graphics, and extensive information-sharing facilities. They founded Sun Microsystems in February 1982 and the new company’s first big breakthrough was a contract signed in 1984 with ComputerVision to supply hardware on which this company’s CAD software would run.

While Sun Microsystems does not make PC’s, its core products, based on the UNIX operating system, are workstations, file servers, central processing units and related machines all of which are aimed at the high volume, data transaction market.

The market response to the company’s products was enthusiastic and since inception revenues have grown substantially. The table below gives an idea of the past six years financial performance (year-end June):

	1994	1995	1996	1997	1998	1999
Revenue. \$m	4.7	5.9	7.1	8.5	9.7	11.7
Net income \$x1000	196	356	476	762	763	1,031
Earnings per share. \$	1.01	1.81	1.53	1.03	1.02	1.35

Source: 1996, 1997, 1999 Annual Reports

Workstations were becoming popular at the time of Sun’s entry into the market and the effect of this movement was at the expense of minicomputers. As a newcomer Sun was able to focus exclusively on new technology, when established competitors had to continue



to support older systems that customers were reluctant to scrap. It also concentrated on building strong relations with valuable clients and leading software developers.

By the late 1980's Sun had developed a faster workstation based on a different kind of microprocessor using reduced instruction set computing (RISC), and scaleable performance architecture (SPARC). By the end of 1989 SPARC was the most popular workstation on the market although by this time Sun had outsourced the manufacture of processors, by licensing the design to other manufacturers who supplied Sun's needs. By 1992 all of its new workstations used SPARC technology.

Alongside hardware development, the company was simultaneously ensuring that software was available to take advantage of the enhanced capacity of its systems. To this end, Sun signed an agreement with AT&T to develop an enhanced version of the UNIX operating system, which became the software standard for workstations.

In 1990 Sun Microsystems extended its target market beyond engineers and designers to include other commercial users, including insurance companies, airlines and publishers. A basic system was introduced to meet the needs of the lower end of this sector, and software publishers were persuaded to adapt many popular programmes. For example, Lotus 123 ran on the SPARC system and this broadened its appeal in the commercial market. By 1991 Sun had gained 38% of the workstation market and this was attributed not so much to the speed or the system, but to the open UNIX-based operating platform.

### **Birkbys Plastics**

Birkbys Plastics makes mouldings at its Liversedge headquarters near Leeds, and, since 1996 in Glenrothes, Scotland. The company, which was founded in 1926 to make telephones, was taken over by Plessey in 1982. General Electric Corporation (UK) then bought Plessey, but decided that Birkbys was too remote from its core business. General Electric sold it in 1990 to the current owners, the Japanese Marubeni Corporation, which is trading company.



Birkbys is the longest established thermoplastic injection moulding company in the UK and it offers a complete service from product design to JIT manufacture of mouldings, metalwork and assemblies. Birkbys ships to eighty locations in more than twenty countries and the company has technology transfer agreements in Portugal and the USA.

Prior to 1991, Birkbys sold most of its production to the automotive industry. Today its main customers are Sun Microsystems (Scotland and California), Ford (worldwide), Xerox Corporation (worldwide) and Black and Decker (UK). Birkbys main suppliers are GE Plastics and BASF. It has a turnover of £60m.

Until 1996 all staff concerned with design engineering and manufacturing worked at the Head Office in Liversedge where a range of presses mould plastic resin to designs specified by the customer. Sun often uses Birkbys design expertise, as the company had pioneered the application of Computer Aided Design technology in the plastics industry.

Design and manufacturing is for four product sectors, European automotive (e.g. Ford and VW), Japanese automotive (Nissan and Toyota), Consumer Electronics (Black and Decker), and business electronics (Sun).

The company's aim in 1994 was "to become a world class manufacturer in our field by meeting our customers standards and requirements."

Birkbys today (1999) has preferred supplier status with Sun Microsystems worldwide and Toyota and has quality approvals with respect to ISO 9001, ISO 9002 and Ford Q1. It is a certified supplier to Rank Xerox and to Digital worldwide.

## **OVERVIEW OF THE SUPPLY CHAIN**

The Linlithgow plant assembles components made by and obtained from other suppliers, and Printed Circuit Boards (PCB's) made in-house, into a range of workstations designed



by the parent company in the USA. Each Monday the corporate supply chain team provides Linlithgow with a weekly and monthly supply plan for each product assembled at the plant. The buyer/planners convert this to material requirements that are passed on to suppliers.

Frans Maas and occasionally other freight companies, deliver components to a warehouse a few miles from Linlithgow. There the parts are assembled into kits, which Frans Maas transport to Linlithgow to replenish the assembly lines. Operators take a kit, assemble a complete unit, and pass it for testing. Once tested, units are passed for packaging and then dispatched to the European distribution centre in Holland, or shipped to Japan for distribution in the Far East.

Frans Maas is responsible for all logistical aspects of the process including assembling parts into kits; delivering them to Linlithgow, and dispatching finished products.

GE Plastics makes plastic resin at its plant in Spain and Birkbys moulds the resin into parts. These are then assembled with other components to make the chassis, or enclosure, into which Sun installs the PCB's. The other components such as metal parts, cables and power supplies are bought from sub-tier suppliers.